

RAILWAY AGE

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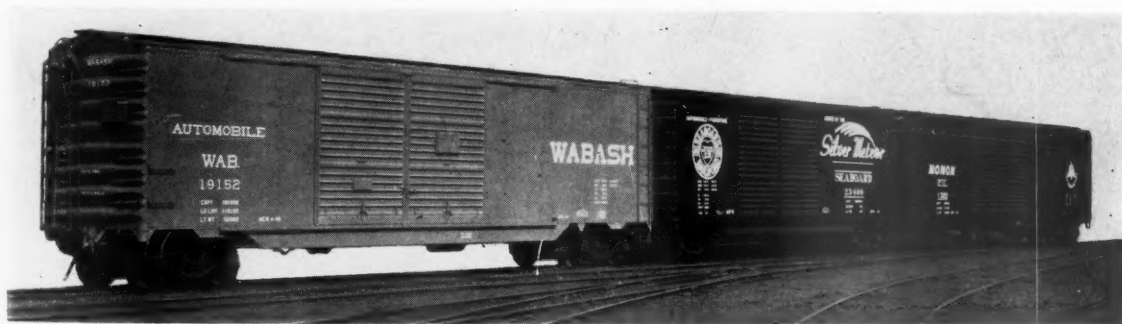
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WEEK AT A GLANCE

MORE SPACIOUS STATION: There was a time when the architects who planned railroad stations appeared to be suffering from acute agoraphobia. Great ingenuity was expended in cluttering up waiting rooms and concourses with obstacles to the free flow of traffic, and such open areas as were allowed to exist were dwarfed in length and breadth by the fairly common practice of putting ceilings up in the general vicinity of the stratosphere. The Fort Street Union Depot in Detroit had these characteristics, and their inappropriateness was particularly evident under the stress of wartime travel. What the railroads have done to modernize the appearance of that terminal, and to provide more room and a more convenient and practical arrangement of its facilities, is reported in the illustrated article on page 34.

ACCOUNTANTS' OPPORTUNITY: As President John Barriger of the Monon remarks in his article in this issue (page 48), the accounting departments of the railroads now more than ever are essential parts of management and an indispensable factor in determining policy. If they ever were considered mere scorekeepers after the event, that time has passed, and their difficulty now is to provide quantitative data, properly screened and evaluated, fast enough to meet the needs of the decision-makers. The speed and economy with which their work is done greatly depend on the modern machinery developed to multiply their effectiveness.

POSTWAR L.C.L. PRACTICES: Success in handling l.c.l. freight depends on the speed and care applied to the entire operation, not merely on spectacular performance in some one phase of it. One proof of this is the experience of the Union Pacific, summarized herein (page 51) by that road's P. J. Lynch. Remarkable advances in handling the shipments and the accompanying paper-work are the result of mechanization of practically every step in the whole procedure, but equally important is the careful planning that shows up in efficient use of these machines.

SPACE-SELLING STUDY: This issue's news pages report the Interstate Commerce Commission's plan to take a look at coach-seat and Pullman-space reservation practices. While ordered on the commission's "own motion," the investigation has been preceded by complaints from hotel operators, columnists, commentators and congressmen that ordinary run-of-mine customers don't get a square deal at the ticket counter.

COACHES FOR THE "EAGLES": The illustrated article on page 42 describes and pictures coaches of various interior arrangements, and accompanying head-end cars, recently completed by A.C.F. for the "Eagle" services of the Missouri Pacific and Texas & Pacific. One coach lay-out is

unusual in that there are windows in the non-vestibule end to allow its use as an observation car. Dormitory facilities for dining-car and train crews have been given exceptional attention. The equipment described is part of 134 new passenger-train cars being built for these southwestern railroads.

INSEPARABLES: After the long days of dearth in the Thirties and the hectic war period, in both of which the railroads wore themselves out faster than their equipment and fixed property could be replaced or improved, the necessity for the expenditure of large amounts of capital for renewals and enlargements of facilities that are obsolete or broken down is too acute to be met with half measures. But the spendable capital of the railroads is rapidly being depleted, our leading editorial points out, and they will not be able to continue their rehabilitation and betterment programs at full speed unless something is done to augment net operating income. That "something" is a simple, fundamental modification of regulatory practice. Inadequate N.O.I. results when increases in revenues (rates) lag far behind increases in expenditures (labor and materials). The lag must be eliminated. Rates must be increased at the same time as wages.

"FACIALS" FOR STREAMLINERS: The car-washing facilities of the Kansas City Terminal, recently mechanized, turn out thoroughly scrubbed and polished cars and locomotives, as our article on page 40 explains. At the same time, the improvement has cut the cost of this operation about one dollar per car.

BASING-POINT BAN STICKS: Protests from the people it claims to be helping are not deterring the Federal Trade Commission from proceeding with its campaign to ban all "common" pricing practices which involve absorption of freight charges or other devices for the equalization of delivered prices. It becomes increasingly clear that legislation alone is the alternative to a wholesale dislocation of the national economy, the effects of which on railroad traffic already are making themselves felt in some localities, either in increased competition or in pressure for railroad rate concessions.

FREIGHT TRAIN-HOUR CUTTER: The Rock Island moves 18 to 22 trains a day over the single-track line between Herington, Kan., and El Reno, Okla. By the installation of centralized traffic control train movements in the entire territory are controlled from one point—and so effectively that slow freights save, on the average, two hours, and red-balls one hour, in the run between these terminals. The installation is described in the article on page 54.

BETTER TIME and ON TIME



The higher speeds and more precise schedules that are possible with General Motors Diesel freight locomotives help railroads get *more* business and hold present tonnage in the face of stiff competition.

Consider, for example, the Lackawanna's fleet of General Motors Diesels which provide *overnight* service between the Great Lakes and the Atlantic and greatly accelerate freight delivery schedules.

The first four of these locomotives — forerunners of

a growing fleet of GM Diesels on the Lackawanna — have been in service since May 1945. In 34 months these locomotives have rolled up 1,607,769 miles of faster, more reliable freight haulage. This figures to an average of 11,822 miles a month each — availability, 88.4%*.

Records like these are no accident. For General Motors Diesels are engineered and built by men who pioneered the application of Diesel power to main-line train propulsion and who have specialized in Diesel motive power ever since.

PERFORMANCE OF GM DIESEL FREIGHT LOCOMOTIVES ON THE LACKAWANNA

Loco. No.	H. P.	Date Placed Into Service	Total Miles Operated	Av. Miles Operated Per Month	Percent Availability*
601	4050	5- 6-45	402,307	11,833	88.2
602	"	5- 6-45	405,668	11,931	88.6
603	"	4- 8-45	402,913	11,850	88.7
604	"	5-10-45	396,881	11,673	88.2
TOTAL			1,607,769	11,822 (Av.)	88.4 (Av.)

*Availability determined on basis of hours available for service to total potential hours

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A SIGNIFICANT DECLINE IN RAILWAY WORKING CAPITAL

In the three years ending with April, 1948—the latest month for which the statistics are available—the cash and temporary cash investments of the railways declined \$1,345 million. This figure is significant evidence of the inadequacy of the net operating income that the railways have been earning since the war to provide means for carrying out the large program of rehabilitation, improvement and expansion which railway managements have been and still are carrying out.

Fourteen Subnormal Years

Total cash and temporary cash investment amounted at the end of April, 1941, to \$869 million; at the end of April, 1945, to \$3,211 million; at the end of April, 1948, to \$1,857 million. The increase during the war years was due to large net income earned during those years, to government restrictions that kept wartime spending for equipment and materials abnormally low, and to the fact that railway managements under government influence used only a small part of the wartime net income to pay dividends. Ten years of depression earnings and expenditures preceded the four years of war. Hence, when the war ended the railways had immediately behind them 14 consecutive years of abnormally small expenditures in proportion to their normal needs for maintenance, improvements and expansion.

Confronted with the demands of a record peacetime traffic, they began at once a large program of expenditures to bring railway properties up as rapidly as practicable to the standards demanded by postwar conditions and the demands of traffic. Few railways had good enough credit to finance by the sale of stock. As previously, they have been able to finance the purchase of a large amount of equipment with equipment trust certificates. They had a right to expect that from a record peacetime traffic they would be allowed by the Interstate Commerce Commission to derive a record net operating income from which they could finance the bulk of their expenditures for the rehabilitation, improvement and expansion of their fixed properties.

On the contrary, because of the ruinous lags that have occurred between their increases in costs, on the one hand, and in rates, on the other hand, their net operating income during the three years ending with April averaged only \$700 million a year, as compared with an average of \$1,017 million in the decade ending with 1930. And this was in spite of the fact that, owing to decline in the purchasing power of each dollar, the railways need at least 50 per cent more dollars of net operating income in the present postwar period than in 1921-1930—i. e., an average of \$1,500 million a year, or twice as much as they have been earning.

It is because of this utter inadequacy to their requirements of the net operating income that they

Revenue Statistics, 1941 and 1948

	Month of May		Inc. or decrease \$(000)	% Inc. or decrease
	1941 \$(000)	1948 \$(000)		
Railway Operating				
Revenues	442,286	796,403	+ 354,117	+ 80.0
Freight revenues	370,903	666,984	+ 296,081	+ 79.8
Rev. ton-miles	39,721,024	50,073,874*	+10,352,850	+ 26.1
Revenue per ton-mile (cents)	0.932	1.332*	+ 0.400	+ 42.9
Passenger revenues	37,493	71,786	+ 34,293	+ 91.5
Revenue passenger miles	2,140,277	3,148,509*	+ 1,008,232	+ 47.1
Rev. per passenger-mile (cents)	1.75	2.28 *	+ 0.53	+ 30.3
All other revenues	33,890	57,633	+ 23,743	+ 70.1
Operating expenses and rentals	307,872	630,258	+ 322,386	+104.7
Railway tax accruals	46,310	75,967	+ 29,657	+ 64.0
Payroll taxes	(1)	21,712		
Federal income taxes	(1)	28,137		
All other taxes	(1)	26,118		
Net Railway Operating Income	88,104	90,178	+ 2,074	+ 2.4

(1) Figures for 1941 not available
* Estimated

have been earning that the railways during the last three years have been reducing by an average of \$500 million a year the cash and temporary cash investments that they accumulated during the war years. Of course, it was reasonable to expect that this working capital would be used some time—probably during a depression. But what kind of a system of regulation is it which causes a huge reduction in the working capital of a great industry throughout three years when that industry is doing the biggest peacetime business in its entire history?

Railroads Must Spend More

What of the future? The railways cannot continue indefinitely making expenditures, however much needed, which reduce their working capital. But it is essential to the welfare of the nation, whether in peace or war, that they continue and even increase the expenditures on their postwar program of rehabilitation, improvements and expansion on which actually they have only just got well started. From only one source can come adequate funds—viz., *increased net operating income*.

What, then, are the prospects for net operating income? The Bureau of Transport Economics and Statistics of the Interstate Commerce Commission recently made an estimate in a statement quoted in *Railway Age* of August 21, page 46, that on the basis of present costs, traffic and rates, Class I roads would make an annual net operating income of \$1,119.4 million. This was less than the estimate of \$1,200 million which the *Railway Age* made in an editorial in its issue of July 31, on the basis of results in May. The net operating income earned in May was \$90 million. The net of \$125 million reported for June was misleading because it was inflated by the inclusion of a retroactive reduction in payroll taxes made effective by Congress from January 1.

The net operating income now being earned is a great improvement over the average of \$700 mil-

lion a year earned in the first three years of the postwar period, but it is much smaller than is demanded by fairness to the owners of railroad securities and the welfare of the public. An overwhelming case can be made for the view that the railways should have made an average of \$1,500 million net operating income within the last three years, or more than twice as much as they did. First, because of the prosperity in general business, the railways have handled a record peacetime traffic, and the Interstate Commerce Commission in its opinions repeatedly has held that they should be allowed to earn unusually large net operating income in periods of prosperity to offset the unusually small net operating income they have earned and are sure to earn in years of depression.

Second, the fact that the railways have found it necessary to reduce their cash and temporary cash investments by almost \$1½ billion, or at a rate of \$500 million a year within the last three years, is indisputable proof that they must earn much more net operating income in future if their needed program of expenditures is to be continued. No industry, no business, ever so greatly reduced its working capital in a period of either prosperity or depression except because its current earnings were much too small for its needs. A period of record business such as we have had during the last three years is obviously a period when working capital should be increasing in preparation for the decline in business which is sure to come, not declining as if the nation's business was in the midst of a depression.

The great changes in railway earnings and expenses that have occurred in the World War II period and postwar period are strikingly shown by the statistics for May, 1941, and May, 1948, that are given in the accompanying table. Figures for May, 1948, are used in the comparison because they are the only statistics yet available which indicate accurately the effect on net operating income of all the war and postwar changes in unit costs and rates that have occurred.

The System Is at Fault

The statistics show that an increase of 80 per cent, or \$354 million, in gross earnings in May, 1948, over May, 1941, was necessary to enable the railways to get an increase of 2.4 per cent, or about \$2 million, in net operating income. In May, 1941, expenses and taxes were 80 per cent of gross earnings and net operating income 20 per cent; in May, 1948, expenses and taxes almost 90 per cent, and net about 11 per cent. In other words, it would have required only one-half as large a decline of gross to have wiped out all net in May, 1948, as in May, 1941.

The increase in gross was due to increases of 26 per cent in freight traffic and 47 per cent in passenger traffic, and to advances of 43 per cent in rev-

enue per ton-mile and 30 per cent in revenue per passenger mile. The increase of over 100 per cent in expenses was due largely to the increases in both freight and passenger traffic handled, but much more largely to advances in wages and in the prices of fuel and materials.

Not only is the net operating income now being earned still too small, but it is being threatened by a new wage movement in which the labor unions are demanding an increase of 25 per cent. Whether, in view of what has occurred in other industries, another advance in railway wages can be avoided is conjectural. One thing is certain, however. Railway managements owe it to their security owners and the public to refuse absolutely to agree to any further advance in wages which will not be *accompanied* by an even larger advance in rates. The ruinous lags between advances in costs and in rates must be stopped now. Because of the system under which increases in railway revenues always have lagged behind increases in railway costs, the railroad industry alone has failed for three years to participate in the nation's postwar prosperity. The time has come when the future of the railway industry and of the nation demands changes in the system of fixing railway wages and railway rates which will make it compulsory for the government body regulating rates to recognize fully and *immediately* all the increases in costs which are forced upon the railroad industry by economic developments and government action.

CONVENTIONS AND MORALE

September is distinctive to railroad men as the month of conventions. Annual meetings of no less than eleven organizations of supervisors in three technical departments will be held within that month this year. Nine of them will occur at Chicago. The electrical sections of the Engineering and Mechanical Divisions of the Association of American Railroads will meet simultaneously September 8 to 10 at the Hotel Sherman, with a common exhibit. The five coordinated associations of mechanical department supervisors will gather at the Hotel Sherman, September 20 to 22, without exhibit.

The American Railway Bridge and Building Association and the Roadmasters' and Maintenance of Way Association of America will meet simultaneously September 20 to 22 at the Hotel Stevens, with exhibits. The Communications Section of the A. A. R. will meet at Colorado Springs, Colo., September 28 to 30, with exhibits. The Signal Section will meet at Buffalo, N. Y., September 14, 15 and 16, also with exhibits.

So large a number of these meetings in a single month brings the important part which these or-

ganizations and their meetings play in the continued health and progress of railway transportation sharply into focus. Despite the criticisms which some railway managements at times have directed, particularly at the associations of mechanical-department supervisors, for taking considerable numbers of supervisors away from their duties for several days a year to attend annual meetings and an occasional committee meeting, these associations exercise a strong influence in the direction of improved morale. A supervisor, well selected for the promise he shows for the development of leadership qualities, returns from the annual meeting of his association with fresh ideas for improvements of performance in his special field of operation which, in themselves, mean more efficiency or greater reliability from the part of the organization to which he belongs.

But that is not all. The effect of the enthusiasm for his job which is engendered by participation in the work of an association, in the affairs of which he takes part as an equal, does not end with the supervisor himself. It cannot help but be felt by the men who look to him for leadership with an end result of improved morale throughout the entire group. While difficult to evaluate in terms of man-hours or dollars and cents per unit of performance, this may well exceed in value the more tangible results of improvements in practice acquired from the papers and discussions to which he has listened and in which he has participated.

There can be no question as to the value of these organizations and their annual meetings to the welfare of the railroads, both tangibly and intangibly. And those who contribute the most to the success of the work of the organizations by their participation in committee work are the members who profit most.

These considerations were no doubt in the minds of the General Committee of the Mechanical Division when, in its 1948 annual report, it recommended that the mechanical departments of member roads support the coordinated mechanical associations—the Air Brake Association, the Car Department Officers' Association, the Locomotive Maintenance Officers' Association, the Master Boiler Makers' Association, and the Railway Fuel and Traveling Engineers' Association—by allowing their supervisory officers to take committee assignments and to attend the annual meetings.

FACING FACTS ABOUT ABANDONMENTS

There should be no more tearing up of railroads in the United States, but there will be some torn up unless the systems as a whole can earn sufficient to provide a reasonable amount for the maintenance of light lines and for development purposes. The only other method of providing such service would be a dip into the public treasury, or a further contribution by the investor in railroad properties.

—P. J. Neff, chief executive officer of the Missouri Pacific

REVAMPING GIVES OLD STATION NEW LOOK

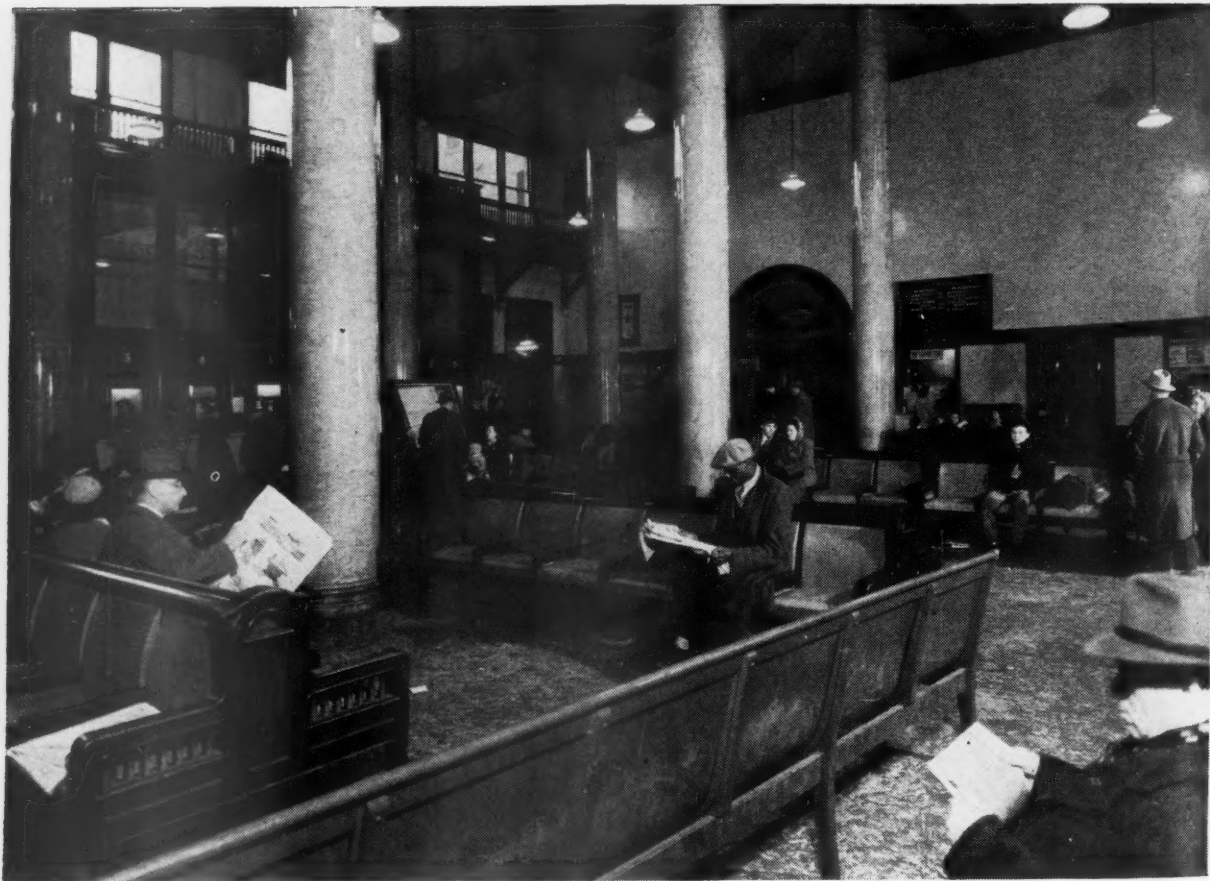
By O. E. HAGER
Chief Engineer
Fort Street Union Depot Company

Popular acclaim has been an immediate reward for the expenditure of a sizable sum to modernize the Fort Street Union Depot in downtown Detroit into a comfortable, convenient, quiet and attractive passenger terminal, with many special features, including air conditioning. And, as a result of functional changes made, tangible rewards are expected to continue to accrue to the tenant railroads—Chesapeake & Ohio, Pennsylvania, and Wabash—in the form of increased efficiency of personnel, lower maintenance costs, and improved service to patrons.

Not only was the old Fort Street Union Depot archaic, and anachronistic in comparison with the name trains it served—the “Pere Marquettes” and “Sportsman” of the Chesapeake & Ohio, the “Red Arrow” of the Pennsylvania, and the “Red Bird”

and “Detroit Arrow” of the Pennsylvania-Wabash—it did not provide accommodations satisfactory either to passengers or their railroad hosts. When the station was opened in 1893 its designers could well have boasted that it had ample capacity to accommodate all anticipated railroad passenger traffic in and out of Detroit for many years, for few would have predicted that from a population of 205,876 in 1890 the city would grow to one of 1,623,452 in 1940. It is doubtful, however, if the designers, proudly watching the effectiveness with which the structure handled the 252,050 people it did in 1901, would have agreed that their creation would be able to handle 1,506,163 passengers, as it did—albeit unsatisfactorily—in 1944.

Even before the heavy traffic of the war period, the phenomenal growth of Detroit and the public



The old dimly-lighted waiting room was not only unattractive but inadequate in its public accommodations—Note the 2½-story ceiling, which wasted enough space to provide a new second floor

Alterations within the Fort Street Union Depot at Detroit, Mich. completely alter its appearance and provide nearly 5,000 sq. ft. of additional space for direct public use

use of the train service into and out of the old depot had placed on it the blight of inadequacy. As a result, studies were started in 1943 to decide whether to modernize or rebuild the station. These included a careful analysis of the existing facilities and the possibilities of expanding them.

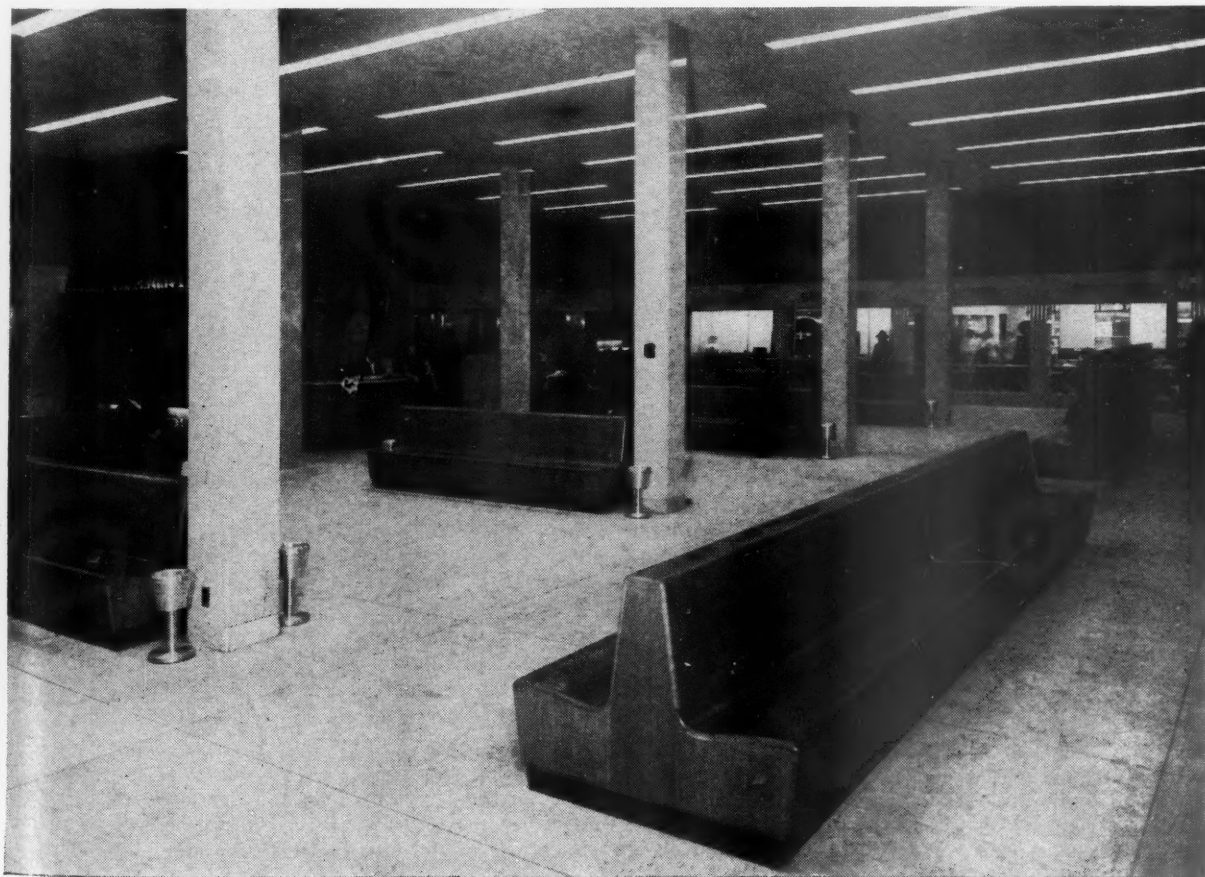
The old station was of the stub-end type, with red brick exterior and red Indiana limestone trim. It had three entrances—two from Fort street, which passes the depot on the north, and the main entrance from Third street, which flanks it on the east. The public space in the depot was composed mainly of a waiting room on the Third Street side and a train concourse immediately behind it to the west, leading to the train sheds. The concourse was about 100 ft. long but only 32 ft. 6 in. wide. Even this narrow width was re-

Table I — Comparison of Areas Assigned to Public Facilities in the Old and Remodeled Stations

Facility	Original (sq. ft.)	New (sq. ft.)	Difference (sq. ft.)
Concourse	2,836	4,713	+1,877
Waiting room	4,510	5,732	+1,222
Ticket office space	681	1,230	+ 549
Telephone & telegraph	204	640	+ 436
Baggage check space	None	440	+ 440
Information desk	81	84	+ 3
Newsstand	144	280	+ 136
Restaurant	1,538	1,388	— 150
Restaurant kitchen	716	616	— 100
Women's room	754	512	— 242
Women's toilet	211	301	+ 90

stricted to 15 ft. 6 in. near the center by the rear of the ticket office, which jutted into the concourse.

A further disadvantage of the old layout was that



The new air-conditioned waiting room, 1,200 sq. ft. larger than the old, is featured by its glareless lighting, excellent acoustics and effective public address system

Table II — Public Facilities Moved from Ground Floor to Basement Level to Provide Additional Space on Track Level

Facility	Original sq. ft.	New sq. ft.
Men's room	561	456
Barber shop	None	231
Auxiliary restaurant facilities	258	1,180

there was only one small exit from the concourse to Fort street, which required that most travelers and visitors moving in and out of the concourse pass through the waiting room to reach the street. All of these conditions contributed to congestion in the depot during busy periods.

The waiting room, which had a ceiling $2\frac{1}{2}$ stories high, provided the usual public accommodations and facilities around the sidewalls, including the ticket office; a restaurant; a newsstand; Travelers Aid; telegraph, telephone and information counters; a women's toilet room; a parcel checking counter; and an elevator. The balance of the available floor space around the side walls was occupied by offices for the passenger agents, Pullman agent, ticket agents and station accountants, and by information and reservation bureaus, a kitchen, a storeroom and miscellaneous facilities. With this layout, operations to which the public did not require access were occupying space on the ground floor which, through rearrangement, could be used for the much needed expansion of the public areas. Under the congested conditions prevailing, the $2\frac{1}{2}$ -story height of the waiting room also could be considered poor use of space.

Studies, not only of floor arrangement, but of the building as a whole, disclosed a number of basic and important facts, namely: (1) The building structure itself was sound; (2) to tear it down to make room for a possible new station would not be economical; and (3) the present building would be adequate to give excellent accommodations to the traveling public for the foreseeable future if the entire layout of the ground floor were altered so as to use the available space to the best advantage under today's conditions.

Second Floor Added

These studies resulted in modernization of the station based on plans which called for the removal from the ground floor of all facilities not directly essential to the public and their installation on a new second floor to be constructed through the upper area of the waiting room. They also called for the complete revamping of the first floor facilities.

In the rearrangement of the first floor the main Fort Street entrance to the waiting room was closed so that its entrance lobby could be put to better use. The ticket office was moved to the south end of the waiting room, its former space taken by a relatively small information booth and newsstand. This exchange of facilities not only removed the ticket office obstruction from the train concourse, but also added space to the waiting room and allowed free and easy movement between the Third Street entrance and the train gates. Thus the station interior was opened up to permit large crowds to move into and out of

the building quickly and one of the major inadequacies in the old structure was removed.

To improve still further the flow of traffic directly to and from the concourse, the men's toilet, at the north end of the concourse, was shifted to the basement and was replaced by an enlarged lobby and entrance from Fort street. The telegraph office at the south end of the concourse was moved to the new second floor. This not only added more public space, but also permitted the installation of one more arrival and one more departure gate. It also made possible a direct exit from the concourse to a walkway to Third street and a future taxi ramp. By these major alterations and other minor ones, including moving the train gates themselves about four feet nearer to the stubbed ends of the tracks, a total of 1,877 sq. ft. of space was added to the concourse. This was an increase of $67\frac{1}{2}$ per cent.

Waiting Room Enlarged

The revamping of the services surrounding the waiting room involved moving the women's room from the northeast corner to the southeast corner; shifting the restaurant and kitchen from the southeast corner to the location vacated by the women's room and the Fort Street entrance lobby; relocating the checkroom in an enlarged baggage room off the west side of the new Fort Street entrance lobby; enlarging the telephone room to include the area formerly used by the accounting office; moving the elevator to the southeast end of the new Fort Street entrance lobby; and the previously mentioned shifting of the ticket office and newsstand. The rearrangement of these facilities increased the size of the waiting room by more than 1,200 sq. ft., or 27 per cent.

Since the completion of these alterations, a traveler entering the station from Third street sees ahead of him an information booth flanked on each side by three large doors leading to the train concourse. To his left he can see the ticket office and the entrance to the ladies' lounge at the south end of the waiting room. Glancing to his right, he will see the restaurant, a large soda bar opening directly onto the waiting room, and the entrance to the telephone and Western Union room. Should he walk to the right or left he will pass a bank of the latest type parcel-check lockers recessed into the Third Street wall. Other such lockers are provided in the concourse.

Except the newsstand, which is directly behind the information booth, the men's room and barber shop, which are in the basement, and the baggage room off the new Fort Street lobby, all public services may be seen in a few quick glances from the Third Street entrance. Furthermore, the entire remodeled waiting room affords travelers the opportunity to avail themselves of the various functions incident to travel in a sequence that calls for minimum effort.

A passenger alighting from a train enters the concourse through either of two double exit doors in the train-gate wall. He can go directly ahead to the waiting room and thence to Third street, or he can turn left to the Fort Street exit. The south, or right hand exit, leads to a walkway to Third street and a future taxi ramp.

The decoration in the waiting room is restful and



The remodeled concourse (above), with its tile wall facings, aluminum fixtures and fluorescent lighting, adds to the general appeal of the modernized station. The air conditioning of these telephone booths (below) is believed to be the first installation of its kind

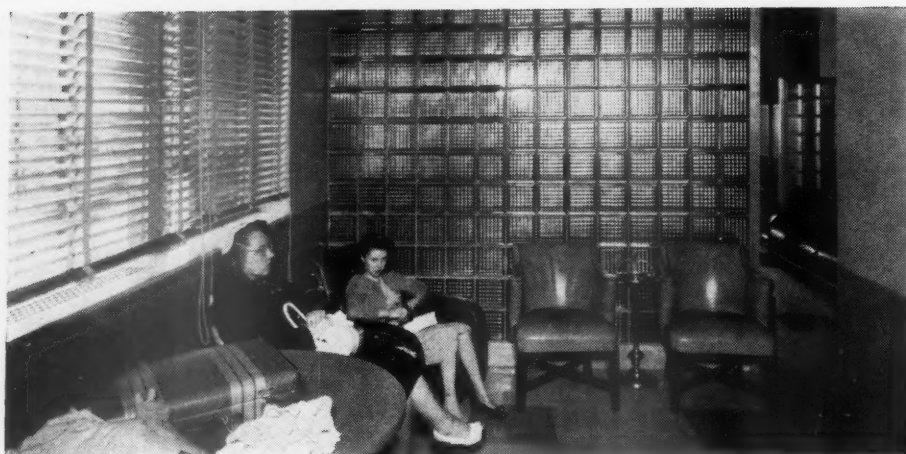


attractive. The side walls are wainscoted with Tennessee marble to a height about two feet above the doors, and above this level are finished in plaster, painted a dark russet in contrast with the light-color marble. Existing columns in the waiting room, which now support the new second floor, are faced with Tennessee marble from floor to ceiling. That part of the marble wainscot extending above the doors forms an effective background for the information signs about the waiting room, all of which are of the silhouette type, made of aluminum block letters.

Comfortable, modern, light-colored oak benches are strategically and systematically located around the waiting room, and most of the benches have spun aluminum urns at their ends for the convenience of smokers. As in the urns and signs, aluminum is also used throughout the interior for window sash, guide posts and railings, giving a pleasing effect. The floor is a light-colored terrazzo, blocked off into large rectangles by separating strips of white metal.

By constructing the ceiling of acoustical material to reduce echoes and noise, the waiting room has been given a quiet and restful atmosphere. Announcements made over an "Operadio" public address system issue from various speakers (recessed in the ceiling) so clear, distinct, and soft that not a single word is missed. This system is flexible in that it can be operated either from the stationmaster's office or from three microphones along the train-gate wall, and is especially convenient for making train announcements or for paging individuals. In addition, the transmitter can be connected directly to "Muzak" wired music program service for appropriate entertainment on special occasions.

One of the most noticeable and pleasant aspects of the new waiting room is its effective lighting. This is accomplished by fluorescent lamps in troffers which are set flush with the ceiling and covered with panels of diffusing glass. Three rows of these parallel troffers, each about 18 ft. long, extend between the north



The women's lounge has top-grain upholstered furniture, heavy wood tables and glass-block partitions

and south walls. When all are lighted, the effect is a practically shadowless, glareless, cool, restful light that highlights the aluminum fixtures and marble walls.

Not the least attractive of the decorations in the waiting room is a wall map which forms the background for the information booth. The map is made of Lucite, on the back of which lines have been etched and tinted to show the routes of the railroads serving the station. From fluorescent lamps along the vertical edges of the map, light is transmitted through the Lucite plate and reflected from the etched surfaces to show the Pennsylvania in red, the Chesapeake & Ohio in white, and the Wabash in green.

The scheme of decoration is completed by a clock in both the south and north walls, and by two symbols of transportation over the Third Street door. The clock faces consist of nothing more than aluminum numerals arranged in a circle on the wall, with aluminum hands. Both are electrically controlled from a master clock over the bulletin board in the concourse. One of the two symbols of transportation consists of a horse's head and a wood-burning locomotive to represent the modes of travel of the past, while two rocket-type locomotives in the other figure suggest the methods of travel of the future.

The new ticket office is a functional part of the decoration of the south wall by virtue of its appealing marble open counter. On top of the counter 10 ticket sellers' wickets are separated by frosted glass paneling supported by aluminum base coves and posts. The paneling and posts extend only about a foot above the counter, leaving the remaining space open.

Decoration within the ladies' lounge consists simply of glass-block partitions, venetian blinds, and two-color painted walls—dark below a dado at window-sill height and light above it. The furniture is wood, upholstered in both light and dark top-grain leather. For occasional emergencies and illnesses a hospital bed is kept in a niche in the wall, hidden by a decorative screen.

The new restaurant, of the serpentine-counter and booth type, packs a lot of seating capacity in a small space. Separated from the waiting room only by an aluminum railing and imitation fluted-marble pillars, and more strongly lighted than the waiting room, it is magnetically inviting. By a delicate control of air

pressures, the air conditioning system prevents restaurant and kitchen odors from entering the waiting room.

The remodeled train concourse has a soundproofed ceiling, glazed ceramic tile wall facings, aluminum fixtures, a terrazzo floor, fluorescent lighting, a distinctive train bulletin board, a master I.B.M. electric clock, illuminated signs, and a public address system. Large picture windows in the train-gate wall, as well as glass panels in the doors, give an excellent view of practically all activities in the train-shed area. Outbound gates have one-way doors and inbound gates have double doors.

Air Conditioning Described

The air conditioning system, a feature of the alteration of Fort Street Union Depot, is actually a "winter-summer" replacement for the old direct-radiation, two-pipe hot water heating system which could not be altered economically to satisfy the needs of the rearranged station. In winter large fans draw in fresh outside air through banks of "Airmat" filters—manufactured by the American Air-Filter Company—then through a bank of fin-type heating coils, and distribute the heated air, as required, to various areas by means of convectors located in the ceiling and at floor level. These diffusing units are designed to give an even flow of air over a specific area. Steam used to heat the fin-type coils is controlled by thermostats in the waiting room and at other critical points. Because of their varying heat requirements, the smaller areas such as the ticket office are controlled by separate thermostats and a comprehensive system of valves, pipes and blowers.

A portion of the same system operates as a cooling unit in summer. However, instead of passing over heating coils, the air is forced over another set of coils connected to a 60-ton Westinghouse horizontal condensing unit. This cooling system operates through-

Table III — Growth of Passenger Business
Fort Street Union Station—1901 Compared to 1944

	Departures	Arrivals	Total
1901	133,290	118,760	252,050
1944	682,263	823,900	1,506,163

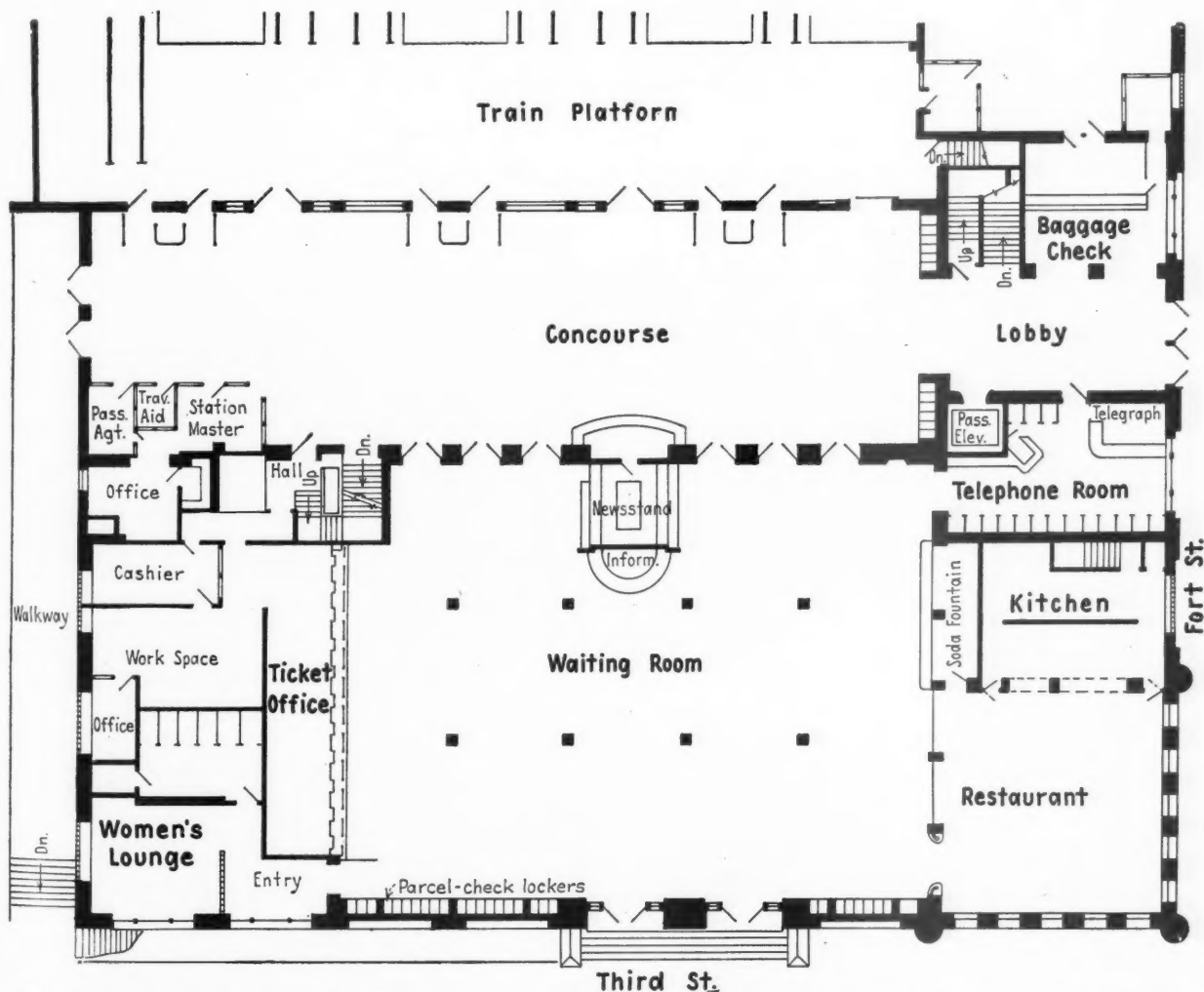
out the waiting room, ticket office, ladies' lounge, restaurant, telephone room, and stationmaster's office. So far as can be determined the telephone booths in this station are the first ever to be air conditioned individually.

In summer the air ducts serving the remaining public areas are divided into two systems and are used for ventilation but not for cooling. One of these systems ventilates the basement barber shop and men's room, and the other ventilates the concourse, baggage check room and Fort Street lobby. In all cases the air is filtered.

The exterior of the station was not changed, except where entrances and windows were closed to conform to alterations within. However, an old canopy over the Third Street entrance was renewed to make its style conform more closely to the new modern interior. The canopy is constructed of steel with aluminum trim and is illuminated by fluorescent lamps set flush into its under face in a manner similar to the lights in the waiting room. Finally, to preserve the life and glaze of the old red brick exterior, the brickwork was cleaned with a combination of steam and acid. The red Indiana limestone trim was sandblasted.

The importance of the modernized Fort Street Union Depot to the traveling public of Detroit will be greatly enhanced by the completion of the John C. Lodge Expressway, now under construction, which will pass under the station tracks in a subway. This expressway will serve the northwestern residential section of the city and will provide fast public transportation service to and from the depot. The modernized, air-conditioned station will then form a creditable link between the streamlined trains it serves and one of the most up-to-date municipal thoroughfares.

The entire station renovation project was the result of the combined efforts of the three tenant lines using the terminal; namely, the Pennsylvania, represented by its chief engineer, J. D. Moffat; the Wabash, represented by its chief engineer, J. C. Bousfield; and the Chesapeake & Ohio, represented by the writer. The detail plans were developed jointly in Detroit by the writer, as chief engineer for the Fort Street Union Depot Company, and Harley, Ellington & Day, Inc., engineers and architects, Detroit. The general construction contract was carried out by Walbridge, Aldinger Company of Detroit, under the general supervision of M. M. Cronk, the depot company's vice-president and general manager, and the writer.



The entire first floor was rearranged in accordance with this plan to provide more space for the public and to promote uncongested movement of passengers to and from trains



One of the two touch-up men who cleans skirts, depressed doors, and car ends with a fountain brush

The Kansas City Terminal has improved the service rendered to eleven of the twelve tenant railroads which use its yard facilities by the use of a car washer. At the same time, it has reduced the cost of washing and has materially improved the appearance of cars going through the yard.

Handling 7,904 cars in March, 1948, the cost of exterior washing was 47 cents per car, including maintenance of the washer, water, electric power and cleaning chemicals. Of the 47 cents, 6.6 cents was for maintenance of plant. This represents a saving of about one dollar per car as compared with hand washing. Since March, the number of cars going through the yard has been increased to about 10,000

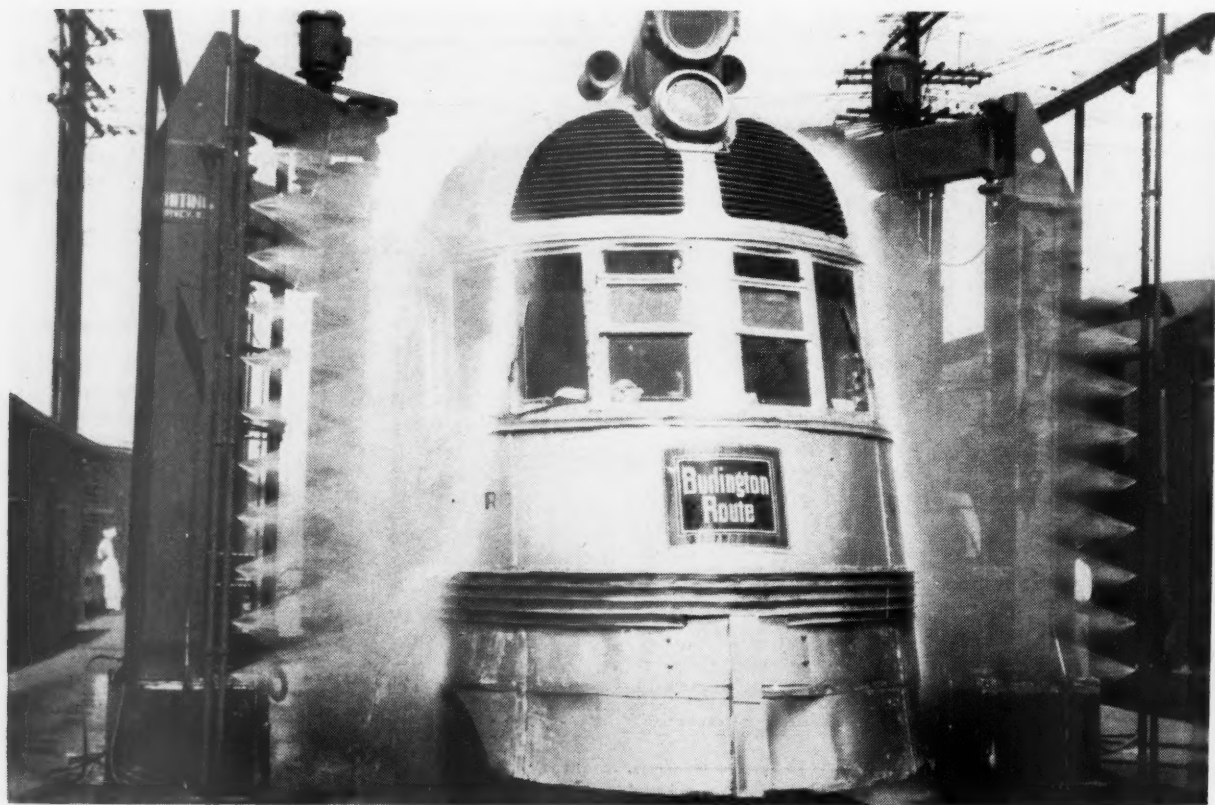
CAR WASHER IMPROVES TERMINAL SERVICE

and it is expected that this will considerably reduce unit costs.

The washer, supplied by the Whiting Corporation, Harvey, Ill., consists of two stations placed about 150 ft. apart. The cars are moved through the washer at a speed of about one mile an hour. At the first station they normally receive an application of cleaning chemical and are scrubbed by the brushes. Between the two stations, two touch-up men, one on each side of the car, use fountain brushes to wash car skirts, car ends, depressed doors, and any parts not touched by the brushes. At the second station the cars are rinsed, scrubbed and rinsed again.

Four men are used for the washing operation. In addition to the two touch-up men, one operates the sprays and brushes from the control cabin and a field man closes doors and windows before the cars reach the washer. If the cars are sufficiently clean before they go through the washer, water above is used without cleaning compounds. This condition is determined by the field man who signals to the machine operator.

Before the washer was installed in January, 1947, the general condition of the cars was such that car



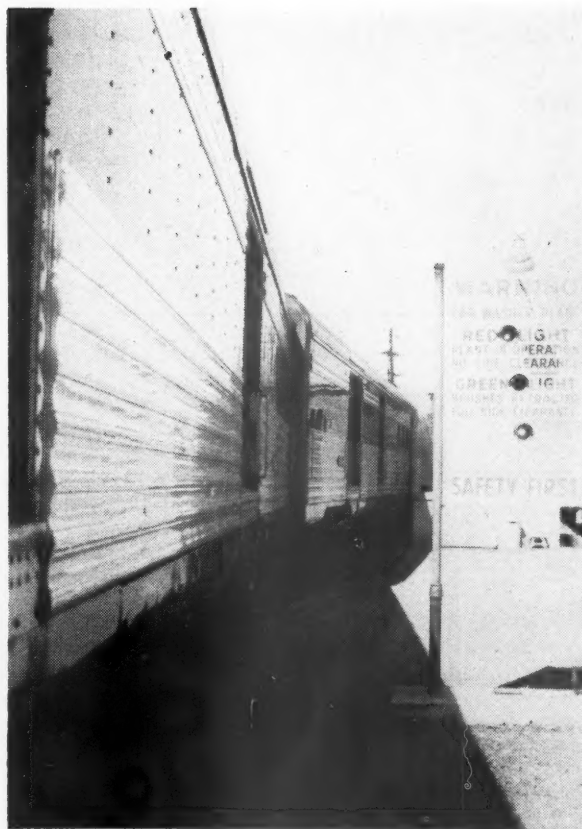
Locomotive of a Burlington "Zephyr" appearing through the sprays of the second or rinsing station

numbers were, in many cases, scarcely readable. Gradually, their condition was improved so that many cars now require water only, and cleaning chemicals are not necessary.

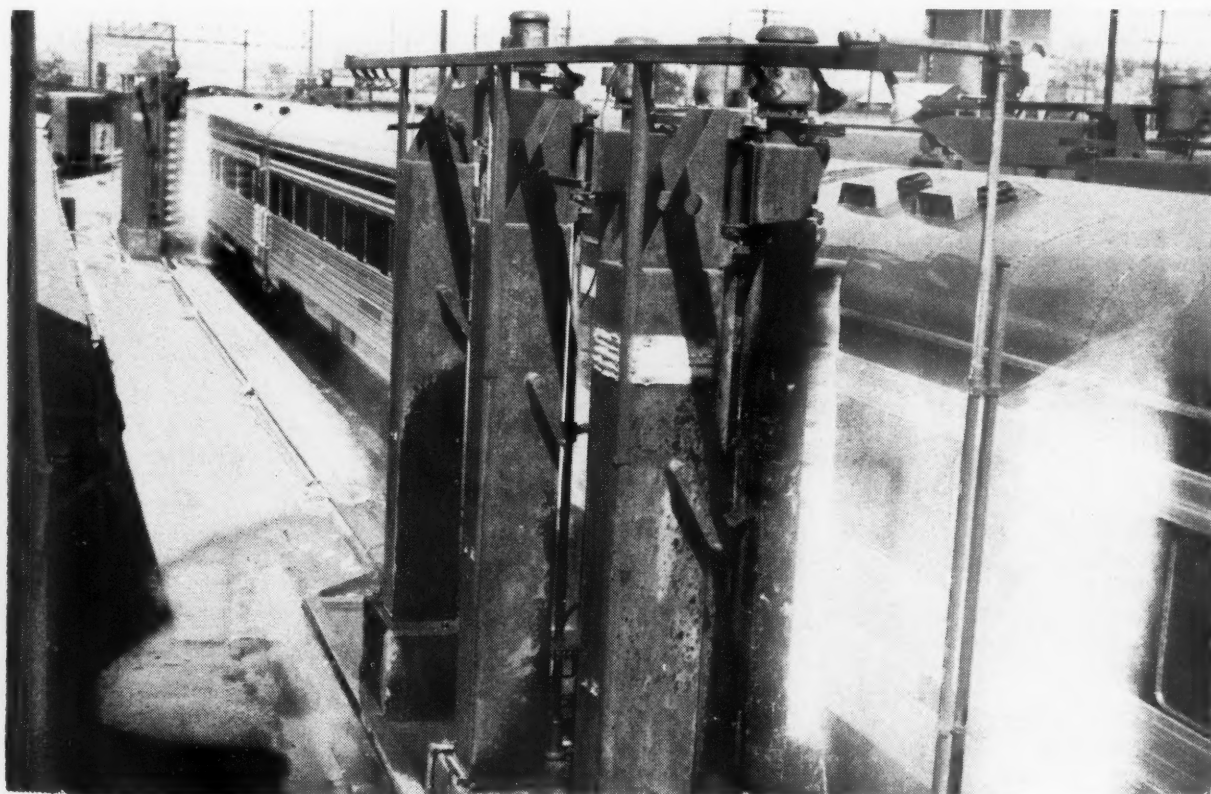
To meet safety requirements and insure proper handling of the cars, a signal board was installed ahead of the first washing station. The board has a red, a yellow and a green light with appropriate printed designations. The green light indicates that brushes are retracted and that a train may proceed. This is done to permit movement of cars over the washer track which do not require washing. The yellow light indicates that the train is to be moved forward until the front end of the first car is even with the last brush of the first washing station. On a signal from the field man, the brushes are swung against the cars, are put in rotation, and the sprays turned on. The train then moves through the washer. The red light means that the brushes are against the sides of the car and there is no side clearance. It has been found possible to clean about 50,000 cars with one set of brushes.

An additional benefit made possible by the use of the washer is the cleaning of hoppers. Previously, it was necessary for one man to hold a container under the hopper while a second worked inside, and then to carry the container to a sewer where the contents could be disposed of. Now, the hoppers are washed and dumped as the car goes over the car washing stand, and the deck, which drains into a sanitary sewer, is flushed at intervals with a hose.

The signaling and operating procedures described meet all sanitation and safety requirements.



The signal board ahead of the first washing station—The inscription under the lower (yellow) light reads, "Equipment to be washed"



A streamliner going through the washer

COACHES AND FRONT-END CARS FOR THE "EAGLES"

American Car & Foundry builds three types of coaches, coach-grills, diners, dormitory-coaches, baggage-dormitory and baggage-mail cars

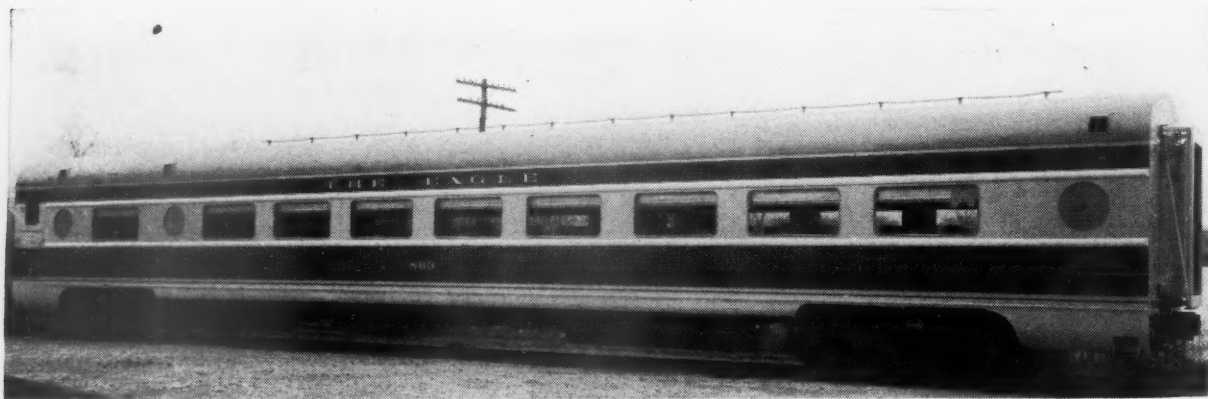
Thirty-five deluxe passenger cars built by the American Car & Foundry Co. have been placed in service on the principal trains of the Missouri Pacific and the Texas & Pacific. Part of a 69-car order placed with A.C.F. by these two railroads, they include dining and dining-lounge cars, lounge-grill coaches, de luxe reclining seat coaches and coach-dormitory cars. On the assembly lines at A.C.F.'s St. Charles, Mo., plant are still more coaches, grill coaches, lounge cars and baggage-railway post office cars.

These cars are a part of a program of 134 new passenger-train cars of all types from three builders. They are for service in the four "Texas Eagle" trains and in the "Valley Eagle," the latter being a new all-coach daylight streamliner for operation in Southern Texas. Others will be assigned to a number of other trains not completely re-equipped.* The present arti-

The predominant exterior color is blue accentuated by gray window pier panels and gray skirts with a band of cream just below the drip rail for the full length of the cars like the other colors, to give continuity to the trains in which this equipment is used.

De Luxe Coaches

To serve a particular need in the creation of a new daylight streamliner six de luxe coaches of unusual design were ordered. Seating 64 passengers, they include a stateroom in each car and have windows on either side of the non-vestibule end so each car can serve as an observation coach when properly placed in the train. Two of these cars will be used with a grill coach between and when combined with a baggage-mail car and Diesel-electric locomotive will provide



One of the Missouri Pacific "Eagle" coaches

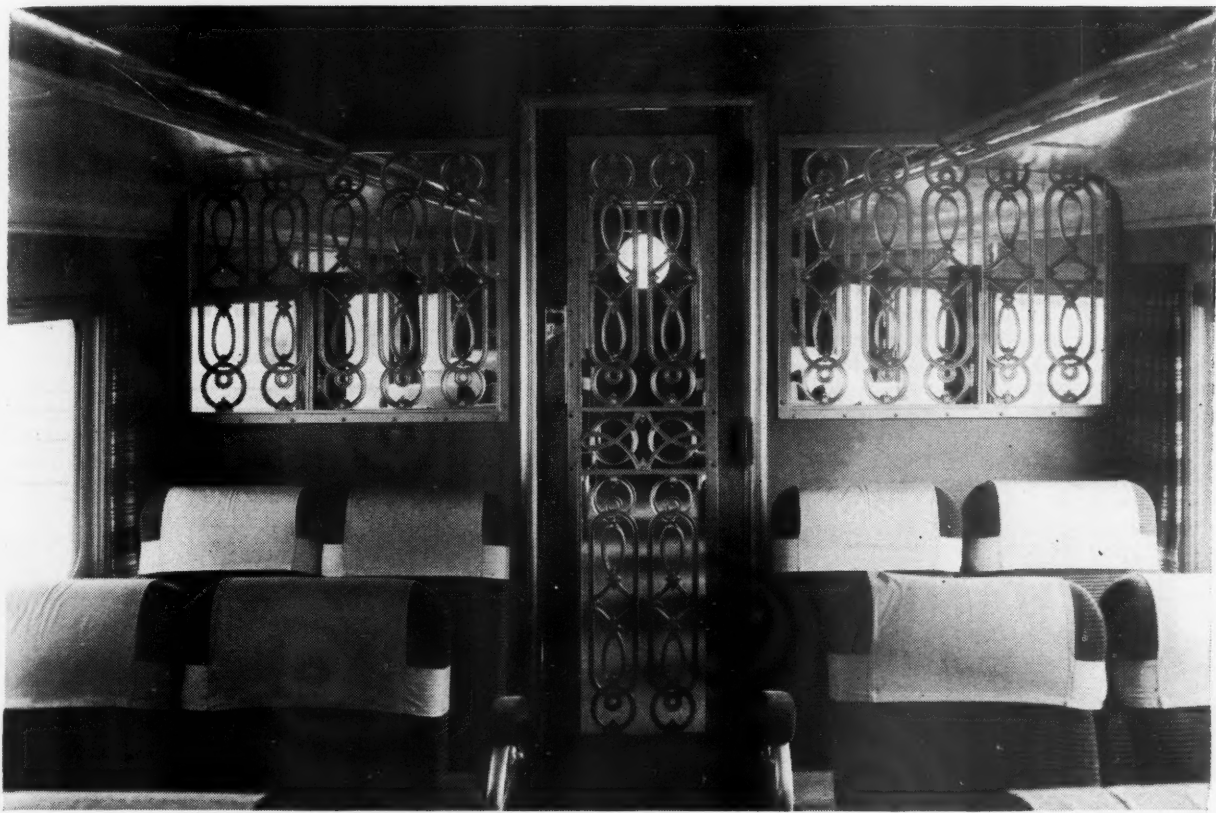
cle is confined to the coaches and head-end cars. A later article will describe the diner and coach-grill combinations.

The cars have low-alloy high-tensile steel underframes. The superstructures of the head-end cars are of the same material; those of the passenger-carrying cars are entirely of aluminum. They are streamlined and conform to all Association of American Railroads contour standards so they may be used freely in interchange service on any streamliner.

* For an account of the program as a whole, see *Railway Age* of August 14, page 64.

an observation-car-equipped train of which only the engine will need turning.

Yellow ceilings, tan sidewalls, rust-upholstered de luxe reclining seats, gold-colored silk-faced Pantasote curtains and two-tone turquoise carpeting provide the color scheme which is basically similar to the other cars in this order. There are appropriate photo-murals on the bulkheads against the men's and women's toilets. The stateroom is similarly decorated except that the walls are green. This private accommodation has a lounge chair and a lounge sofa for four, and a private annex with toilet and washstand.

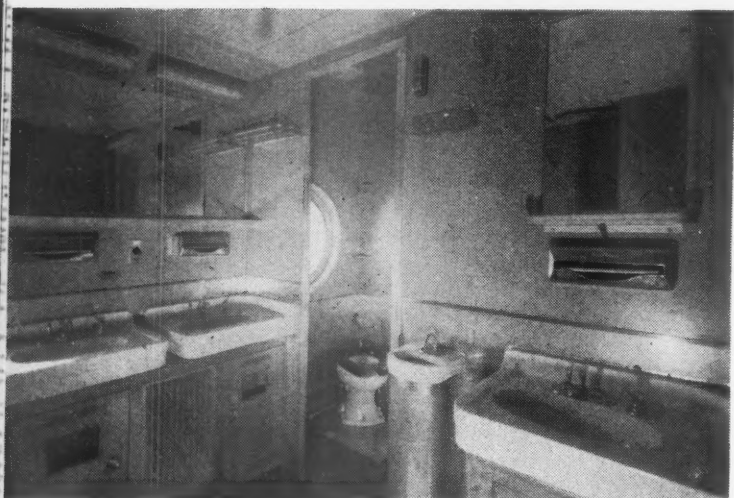


Above—The partition in a de luxe divided coach. Below—Murals decorate the walls at the end of the passenger compartment of the coaches



Twelve 60-passenger coaches and nine 64-passenger divided coaches also have been included in this new equipment. Featuring Coach & Car Equipment Co.'s revolving, reclining coach seats with sliding type cushions, individual adjustable foot rests and drop center arms, they adhere closely in color scheme to the other coaches. The completely equipped women's lounge has canary yellow ceilings and green walls while the men's smoking room is entirely tan. Both rooms are lavishly equipped with wash basins, lounge settees, mirrors and dental bowls; the women's lounge has a special vanity table with chair and mirror and the men's ample electric razor outlets. A built-in water cooler and a radio-receiver serving two loudspeakers, one in each bulkhead at the ends of the coach section, are additional refinements. Photo-murals add to the attractiveness of the cars and a lighted poster frame for railroad and other announcements is just inside the vestibule door on the facing partition.

Seating 40 passengers in one section and 24 in the



In the men's lounge (above) of the 60-passenger coach. Below—The women's lounge in the divided coach



other, the divided coaches are decorated like the cars previously described. Separate toilet facilities for both men and women are provided in each section of the cars. The cars are radio-equipped, and have two-tone turquoise carpet and rust-upholstered lightweight revolving, reclining coach seats.

Dormitory Coaches

The four dormitory coaches point up the trend toward longer runs for dining-car crews and it is with this in mind that these cars were designed. A 10-bunk dormitory has been built into this car. It is equipped with every convenience for the cleanliness of the crew as well as for their comfort. The bunks are in tiers of three, with one high bunk allowing 6 ft. 3 in. clearance underneath to provide room for a clothes locker, a wash stand with mirror, shelves, lights and a dental bowl. There is also a private toilet annex for the crew at the head end of their quarters, containing wash and dental stands and appurtenances beside the toilet itself. At the rear is a 41-in. by 34-in. shower separated from the dormitory by a curtain, and illuminated by a vapor-proof light. Each berth also has individual reading lamps.

Slightly more than half the car is given over to revenue space, divided into two sections, one of which is a smoking section. The interior color scheme from ceiling to carpet follows the other coaches closely, representing a pleasing combination of restful colors. The lightweight reclining seats revolve and have sliding type cushions and arm rests. There are separate annexes for men and women.

Also included is a conductor's office with desk and chair. A microphone is provided for making train announcements.

Baggage-Dormitory Cars

The baggage-dormitory cars combine a completely equipped baggage space 40 ft. long and an air-conditioned dormitory section for fifteen crew members. A conductor's stateroom with sofa, shower and upper berth is also included in the design.

The crew dormitory is a complete living area in itself. Five three-tier folding bunks have individual lighting. The crew lavatory has a crew locker, two toilets, a shower with vapor-proof lighting, dental bowl and three wash basins with individual mirrors. Electric razor outlets are also provided.

Outside the crew quarters at the end of the car is a coach-lunch top-iced refrigerator, switchboard, broom and cleaning locker and a pillow locker. The baggage section has fish racks on either side for half of its length, water cooler, folding wash basin, toilet, and desk and letter case.

Baggage-Mail Cars

Completing this order are thirteen 85-ft. head-end cars for baggage and U. S. Mail. The interior length is 82 ft., of which 30 ft. is devoted to the Railway Mail Service. The postal section completely conforms to R.M.S. requirements. In addition to all the necessary postal equipment the post-office clerks are provided with facilities for their comfort and conven-



The General Steel Castings four-wheel truck

ience, including a completely equipped lavatory, refrigerator, steam cooker and water cooler.

The baggage and storage rooms are equipped with 40 ft. of fish racks and a three-tier baggage rack 18 ft. long and 30 in. in depth. Also included are toilet and washing facilities, water cooler, a letter case for railroad mail and a desk. Ample lighting is provided throughout and there is an 8-ft. and a 6-ft. door on either side of the car.

Construction

The passenger-carrying cars are of a combined riveted and welded design, the center sills, bolsters, cross-bearers, floor beams and end sills being of low-alloy high-tensile steel. Sides, ends and roofs are aluminum,

however, with the underframe sill and sideframe sill of aluminum alloy 17-ST. The cars are constructed to exceed the latest strength specifications of the Post Office Department and the A.A.R.

Electrical power is supplied by a Safety Genemotor driven from the truck axle by a Spicer hypoid-gear drive with automatic clutch. The generator is a 25-kw., 64-volt machine and the 220-volt, 3-phase, a.c. standby motor is rated 20 hp.

Batteries have a capacity of 600 amp. hr. A.c. power at 110 volts, for supplying radio and convenience outlets, is supplied by a Janette, 300-v.a. converter. A safety motor alternator of 2,000-watt capacity supplies a.c. power for the fluorescent lighting used for general illumination. Incandescent lighting is used for such requirements as vestibules, toilets and poster-frame lights.

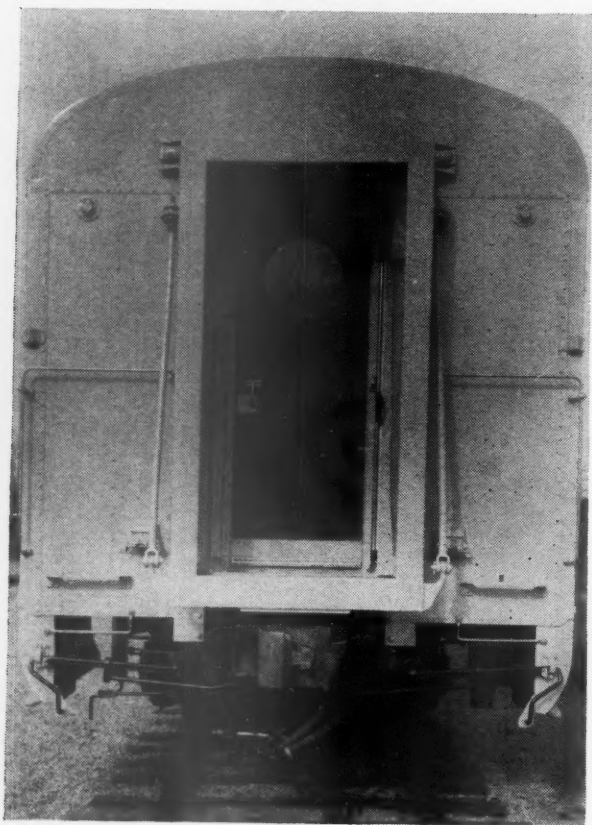
The air brakes are Westinghouse throughout, with the exception of two grill coaches, six de luxe coaches and two baggage-mail cars for use on the St. Louis, Brownsville & Mexico, a subsidiary of the Missouri Pacific, which are equipped with New York Air Brakes.

All brake equipment is HSC fitted with electro-pneumatic straight-air control. Brake cylinders are truck-mounted, four per car. With 100 lb. cylinder pressure braking power is 250 per cent of the light weight of the car. Arrangements have been made for the future application of wheel-slide control.

End equipment features Waughmat Twin-Cushion draft gear and Tightlock type couplers of A.A.R. design. All walking surfaces are Alunalun while vestibule steps are of streamline design. When in the closed position the back of the step is protected to prevent clogging from ice and snow which might prevent the trap door from opening and the steps from lowering.

Before the application of insulation, the interior surfaces of the car were completely covered with Insulmat. A 1½-in. coat was applied to the inside of the car sides, ends and roofs as well as the air ducts and plenum chamber and the outside of the inside metal finish.

The same coating was also applied to all hollow structure members such as posts, bolt rails and carlines with all openings plugged to eliminate air infiltration. Three-inch Fiberglass with asbestos covering provides the desired insulation throughout, with the exception of the floor, where the prevailing thickness is 2 in., and the water tank with a 1-in. covering.



The inside is finished in sheet aluminum, Prestwood and Plymetal for such work as partitions, panels, headlining and ceilings, with an application of stainless steel wherever there is possible danger of damage from baggage or splashing. End and vestibule doors are aluminum and interior doors for lockers and toilets are ½-in. Plymetl. Windows, of the aluminum breather type, double sash, are by Adams & Westlake.

Water supply has been amply provided for, with 200 gallons storage capacity in the coaches. The air-pressure-operated water systems are from Westinghouse Air Brake Company, with Vapor anti-freeze protection and hot water supply. General Electric water

coolers are in all cars, usually one in each of the men's and women's lounges. Air conditioning by Frigidaire complements the Vapor zone system of steam heat which is supplemented by an overhead heat unit built into air-conditioning equipment.

Car trucks are four-wheel single-equalizer type, except that the baggage and mail and the baggage-dormitory cars have six-wheel trucks. The multiple-wear wheels of 36 in. diameter are wrought steel, semi-finished for balancing, with rims ground after mounting by an A.C.F. wheel grinder. With the exception of the Hyatt roller bearings on the grill and de luxe coaches for the St. L. B. & M., all roller bearings are of Timken manufacture.

Partial List of Materials and Equipment Used in the Construction of the Missouri-Pacific—Texas & Pacific Cars

Alumilinting	Stolle Corp., Sidney, Ohio	Ash stands and serving trays	Marshall Field Co., Chicago
Truck frames and bolsters	General Steel Castings Corp., Eddy-stone, Pa.	Ash receivers	Leoffelholz Co., Milwaukee, Wis.
Wheels	American Rolling Mill Co., Middletown, Ohio	Radio	Raymond Rosen & Co., Philadelphia, Pa.
	Bethlehem Steel Co., Bethlehem, Pa.	Railway mail service equipment	American Car & Foundry Co., New York
	Standard Steel Works Div., Baldwin	Seats, revolving-reclining	Coach & Car Equipment Co., Chicago
Axles	Locomotive Works, Burnham, Pa.		Heywood Wakefield, Gardner, Mass.
	Bethlehem Steel Co., Bethlehem, Pa.	Upholstering material	Collins & Aikman Corp., New York
	Carnegie-Illinois Steel Corp., Pittsburgh, Pa.		Goodall Fabrics, Inc., New York
	Standard Forgings Corp., Chicago	Parcel racks	Adams & Westlake Co., Elkhart, Ind.
Defect card holder	Apex Railway Products Co., Chicago		Luminator, Inc., Chicago
Truck springs	American Locomotive Co., Railway Steel-Spring Division, New York		Safety Car Heating & Lighting Co., New Haven, Conn.
	Union Spring & Mfg. Co., New Kensington, Pa.	Light fixtures	Luminator, Inc., Chicago
Upper buffer mechanism	Standard Railway Equipment Mfg. Co., Chicago		Safety Car Heating & Lighting Co., New Haven, Conn.
Buffer castings	General Steel Castings Corp., Eddy-stone, Pa.	Drinking water cooler	General Electric Co., Schenectady, N. Y.
Draft gear	Waugh Equipment Co., New York		Henry Giessel Co., Chicago
Couplers and yokes	National Malleable & Steel Castings Co., Cleveland, Ohio	Combination water cooler & steam cooker	E. A. Lundy Co., New York
		Water purifier	Tested Appliance Co., Chicago
Bolster locking center pin; side bearings	W. H. Miner, Inc., Chicago	Cup dispensers	Logan Drinking Cup Div., U. S. Envelope Co., Worcester, Mass.
Shock absorbers	Houdaille-Hershey Corp., Buffalo, N.Y.	Batteries	Electric Storage Battery Co., New York
Roller-bearing wheel units	Hyatt Bearing Div. General Motors Corp., Harrison, N. J.		Could Storage Battery Corp., Depew, N. Y.
	Timken Roller Bearing Co., Canton, Ohio		Thomas A. Edison, Inc., New York
Electro-pneumatic brakes	New York Air Brake Co., New York	Charging receptacles; trainline receptacles; brake receptacles	Pyle-National Co., Chicago
	Westinghouse Air Brake Co., Wilmerding, Pa.	Axle lighting equipment; motor generator set	Safety Car Heating & Lighting Co., New Haven, Conn.
Simplex clasp brakes	American Steel Foundries, Chicago	Motor alternator	Janette Mfg. Co., Chicago
Hand brake	W. H. Miner, Inc., Chicago	Air conditioning equipment	Frigidaire Div. General Motors Corp., Dayton, Ohio
Brake shoes	American Brake Shoe Co., New York	Air diffusers	Anemostat Corp. of America, New York
Diaphragm	Morton Mfg. Co., Chicago	Air purifiers	Pyle-National Co., Chicago
Vestibule curtains	Adams & Westlake Co., Elkhart, Ind.	Exhaust fans	Tuco Products Corp., New York
Trap doors	O. M. Edwards Co., Syracuse, N. Y.		Safety Car Heating & Lighting Co., New Haven, Conn.
Fiberglass insulation	Gustin-Bacon Mfg. Co., New York	Exhaust blower	Westinghouse Electric Corp., Pittsburgh, Pa.
Sound-deadening material	J. W. Martell Co., Kankakee, Ill.	Exhaust ventilators	American Car & Foundry Co., New York
Doors, interior and exterior; Keystone floor	American Car & Foundry Co., New York		Railway Utility Co., Chicago
Door closers	Norton Lasier Co., Chicago	Uni-flow grills	Barber-Colman Co., Controls & Grille Div., Rockford, Ill.
Side door hangers	Midland Co., South Milwaukee, Wis.	Heating equipment	Vapor Heating Co., Chicago
Masonite	Masonite Corp., Chicago	Hoppers	Duner Co., Chicago
Plymetl	Haskelite Mfg. Corp., Grand Rapids, Mich.	Deodorizers	Germo Mfg. Co., St. Louis, Mo.
Cork; linoleum	Armstrong Cork Co., Lancaster, Pa.	Lavatories	Crane Co., Chicago
Carpet	Beck & Blatchford Co., Chicago	Folding lavatories	Adams & Westlake Co., Elkhart, Ind.
Sash	Adams & Westlake Co., Elkhart, Ind.	Towel dispenser	Scott Paper Co., Chester, Pa.
Glass	Libbey-Owens-Ford Glass Co., Toledo, Ohio	Steam pipe insulation	Gustin-Bacon Mfg. Co., Kansas City, Mo.
	Pittsburgh Plate Glass Co., Pittsburgh, Pa.	Air conditioning pipe insulation	Johns-Manville Sales Corp., New York
Pressed prism safety glass	Pressed Prism Plate Glass Co., Morgantown, W. Va.	Fire extinguishers	Pyrene Mfg. Co., Newark, N. J.
Window curtains	Adams & Westlake Co., Elkhart, Ind.	Paint, exterior	E. I. DuPont DeMours & Co., Wilmington, Del.
Venetian blinds	Ajax Consolidated Co., Chicago	Paint, interior	Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Dining chair; tables	General Fireproofing Co., Youngstown, Ohio		Pratt & Lambert, Inc., Chicago
Lounge chairs; settees	Beck & Blatchford Co., Chicago	Stainless steel water tanks	American Car & Foundry Co., New York
Etched Plexiglass panels	Greenleaf Corp., Pittsburgh, Pa.	Electric wire	Kerite Insulated Wire & Cable Co., New York
Kitchen and pantry equipment; refrigerators	Owen Weber, Inc., Kearny, N. J.		Okonite Co., Passaic, N. J.
Grill equipment	Southern Equipment Co., St. Louis, Mo.	Electric conduit and fittings	Appleton Electric Co., Chicago
Range, steam table and dishwarmer	Stearnes Co., Chicago		Thomas & Betts Co., Elizabeth, N. J.
Electric coffee maker	Silex Co., Hartford, Conn.		
Dishwasher	American Production Co., San Francisco, Calif.		

A CHALLENGE TO ACCOUNTING OFFICERS

As bases for decisions, railroad management needs more definite, quantitative facts, screened of irrelevancies — facts the accounting departments can provide, given adequate modern tools

By JOHN W. BARRIGER

President, Chicago, Indianapolis & Louisville

No branch of the railroad industry has today a greater opportunity than the accounting department to contribute to the industry's welfare and progress. Not even the Diesel locomotive and centralized traffic control can do more to help the railroads than modern accounting methods. The industry urgently needs accounting departments with the knowledge, skill and ingenuity required to apply to the railroads the new techniques of control which the accounting profession has developed—and the industry should provide its qualified accountants with the modern machinery they require if they are to put their valuable talents to the most effective use.

William Mahl, that able lieutenant of the late E. H. Harriman, spoke of "the power of statistics to discipline a property." Apt as that observation was in his time, it is far more pointed today—alike because of the constantly growing complexity of railway operations, the increase in the income and investment which must be policed, and the progress in accounting techniques and machinery which make closer control possible under conditions which would otherwise be adverse.

Success Is Planned

Outstandingly successful railroads do not just happen. Every one of them originated in a great strategy—a long-term plan of development: physical, financial, or aimed at inducing traffic growth. A comprehensive routine of day-to-day scrutiny and control of expense takes its place among the four or five major strategic devices which a farsighted management can use to develop a property into a position of invulnerable strength.

Not so very long ago many railroad men believed that all their problems would be solved if only traffic volume would return to the magic level attained in 1929. We have far surpassed that level and the difficulty of carrying a fair share of gross over into net is greater than it ever was. Railroads thrive best when price levels are stable. They are especially vulnerable to rapid inflationary and deflationary changes. They are now suffering from the inflationary spiral induced by the war. Reasoned judgments as to the future are difficult to reach because economic factors are so tinctured with politics.

At such a time, management has a greater need than ever for the best in methods which accounting science can provide. It is fortunate that fundamental changes have been occurring in accounting, both for railways and for industries, which will promote that branch of business activity from being a mere scorekeeper after

the event into a position as a major tool of management and an essential factor in determining policy.

This change has come about by refining and extending accounting processes so that direct and indirect costs of running the business can be accurately and promptly allocated to the specific functions and products which cause these outlays. By a similar scrutiny of revenues, the source and relative size of profits and the existence of losses can be established. Undetected losses are the shoals on which a business as well as a ship can be wrecked.

Cost finding is as necessary to modern business as charts and maps and navigation facilities are to those who sail the seas or the air. We don't know where we're going if we do not have cost information. The railroad industry still does not have all of the accounting maps and charts it needs and probably not all companies fully utilize those that are available. That is one reason why one-third of the railway mileage foundered in the last depression and why much of the industry today is not moving forward as fast as we hoped it would.

The vast detail and dimensions of comprehensive cost finding would be physically unattainable and prohibitively expensive without the aid of the broad array of modern accounting machines now available to make the innumerable classifications and computations involved in this process. The importance of accounting machinery deserves far more recognition than it has yet received.

Railroads have been handicapped in developing accounting into the same effective tool of management which other industry has developed because of the fundamental "joint-cost" or "common-cost" nature of the entire operation—which simply means that a large share of total costs cannot be attributed to a given service except by assignment according to formulas which are unavoidably arbitrary. However, through the ingenuity of experts in railroad accounting and statistics, such important progress has been made that we may well expect that, before long, railroad management, whether in the supervisory, administrative or executive ranks, will be placed continuously and promptly in possession of cost data—enabling it, in effect, to see the entire operation through a microscope; so it can locate immediately those operations which are not being efficiently conducted or properly priced, or both.

When this result is achieved, the effect will be revolutionary—as great an improvement over the hap-

hazard and financially blind operations of the past as train operation by C.T.C. is over moving trains by "smoke signals."

One of the railways' most difficult problems today lies in the generally inadequate information about the true costs of services and classes of traffic which are suspected of not being adequately compensated. On the other hand, there are some services which may be looked upon with undeserved suspicion, about which more adequate information would prove that they are contributing to, rather than consuming, operating income. Only the further refinement and development of accounting will answer such questions. It is the function of the accounting department to substitute definite quantitative facts for less tangible forms of information; and for prejudice and notions which inevitably are seized upon as a substitute for facts when facts are missing.

The internal development of the United States was accomplished by the construction of its railway network. However, the building of tracks and the provision of equipment would, alone, have been insufficient to create a nation of continental proportions and to bind it together. It was necessary to provide a rate structure which would diffuse production and commerce. Full advantage was taken from the outset of the joint-cost nature of railroading to utilize a great rate-making principle to accomplish that hope—"charging what the traffic would bear." People are greatly influenced by phrases, and "what the traffic will bear" is such a one. Catch phrases conjure up ideas and images in people's minds—sometimes accurately, and at other times incorrectly.

Principles of Rate-Making

The term "what the traffic will bear" represents the basic price factor underlying most quotations, but that combination of words was given a sinister and cynical interpretation. Too many people were led to believe that the meaning in practice was "what the traffic will *not* bear" or—"more than the traffic will bear." The growth of traffic proved the falsity of these misapprehensions, but it did not erase them from popular belief. Moreover, the practice of charging "what the traffic would bear" did produce some inconsistencies in freight rates between places and commodities, which made the beneficial practice a subject of sharp criticism and led to modifications of it which have been harmful to the country and to the railways.

Later, as the railroads became the subject of greater study by economists and lawyers, and as the terms they employed began to get into general use, the more agreeable phrase "value of service" was substituted for "what the traffic will bear." If only that transition of phraseology had been accomplished fifty years earlier, the railroads might have been saved much trouble. We might have healthier railroad systems today and less controversy over rate-making. The "value of service" principle of rate-making brings up the two other fundamental principles which underlie the manner of determination of these charges, to wit: the cost of the service and the return on the investment.

Rate-making theories and principles are too involved a subject for discussion in a short article—but they are questions which await the understanding that only

accounting research and practice can bring. The railway rate structure of the United States had a powerful influence in making this country a great nation, and one in which commerce flowed freely. Now we are seeing administrative and judicial efforts to tear down this rate structure. These efforts are largely motivated by political illusions of imaginary advantages to be gained by local self-sufficiency, without consideration of the national welfare.

False Economy

These theorists conceive it to be economical to save a dime in transportation costs at the expense of a dollar in increased costs of production. If this ignorant or maleficent effort should succeed, the United States would be Balkanized—split up into regions economically autonomous but impoverished, and hence with little incentive to retain their political unity. Perhaps the destruction of a strong America is the underlying motive behind the attack on the rate structure. Be that as it may, this is another danger which sound railroad accounting will help avert. We must remember always that the proper goal of the transportation industry is to reduce, not the aggregate national expenditure on transportation, but the total costs of production and distribution. In striving for this goal, transportation expenditures should not be reduced but should increase, if such increases are less than the offsetting savings in other aspects of manufacture and commerce.

The railroad industry has such little latitude in its own independent control of basic factors in pricing its services, and of establishing its own (largely fixed) costs of production, that it must seek safety in having continuous access to cost information which will enable it more persuasively to advocate its necessities and defend its requirements. Rate and wage cases are becoming increasingly a battle of accounts and statistics. As the railway accounting officers perfect the means by which railway operations are measured in terms of dollars, man-hours and materials required to produce current standards of services, the industry will be bulwarked against demands for rate or wage levels beyond the power of the industry to grant, without sacrifice of those minimum standards of physical and financial strength and security which it is in the primary public interest to protect. The railroads cannot prove their case persuasively in the public interest without more and better figures than they are usually able to produce today.

Accounting summarizes an entire corporate enterprise and penetrates every function and service and component part of the company's work. There is nothing which it short-circuits. However, it is by its own nature so all-inclusive that the myriad components which go into its mass results must be screened and refined and localized. Undigested figures cannot give management the insight which it must have to know whether all of the organism is working normally and healthfully, or whether some part of it is sick, lame or even dead. Dead members are seats of infection, injecting poisons into the railway's economic body.

The railroads are a unique industry in more than one respect. They are, for example, probably the only industry that constitutes a continuing economic and political problem. This has come about because either

the railways or the public have usually been seeking something from the other which would not be voluntarily conceded. There never has been any so continuously sustained public attention to the problems of any other industry. Perhaps the reason is that the railroads alone have to go to the people or the public authorities on so many major matters in which other industries are largely free to make decisions for themselves. Probably, if a manufacturer or a businessman had to go before a public body every time he wished to make a price change or expand or contract a line of production, his industry or business would become a public concern, too, and experience great difficulty in attracting new capital to enter it.

While the railroads have more relations with the public than any other industry, it cannot be said that they have always been the most successful in conducting these relations. Perhaps the fundamental reason for this comparative lack of success has been the failure of the railroads to interpret their problems to the public on all occasions in terms of the things in which the public is interested. The public, for instance, has no very lively interest in the adequacy of the railroads' earnings from a standpoint of fair dealing — but they would probably respond to an interpretation of railroad earnings in terms of the public demand for better service. The public interest in railroad earnings derives wholly from the relationship of such earnings to the procurement of new capital. The protection of the integrity of existing investment through payment of interest and dividends, much as that means to the welfare of millions of people, is, after all, wholly a matter of private interest. It becomes a matter of public interest through the bearing that the adequacy of those payments has on the creation and attraction of new capital needed for the healthy development of the railway industry.

Public Interest Involved

Earning power and return to investors become matters of public interest transcending the individual interests of those receiving the earnings distributed to security holders. The public interest in a fair return lies wholly in the public point of view of creating capital and not in the private point of view of paying interest and dividends. It is unfortunate that along with the catch phrase, "what the traffic will bear," a considerable segment of the public has understood only the more simple aspects of earning power, as evidenced by distribution to security holders, and has overlooked its relationship to the attraction of capital. When the public better comprehends the latter aspect, the resistance to the steps necessary to produce earning power will disappear. The railway problem of today and of the future largely centers in broad questions of capital required for continuous and adequate development of the railways. Better figures, and more adept interpretation of them, will go a long way toward surmounting this difficulty.

Railway managers have proffered to them a paradise of facilities, methods, standards, and techniques which await only incorporation into their properties to create service standards and efficiencies that will meet every public and corporate necessity for successful operation. However, this paradise will not become reality for the

mere wishing. It must be bought and paid for. That calls for capital accumulation and procurement, and both arise out of earning power. This matter of capital procurement, therefore, entails teaching the public some of the economic facts of life — facts the accounting and financial departments know better than anybody else. These departments need, therefore, not only more and better figures, but to develop their skill in the art of communicating their thoughts and discoveries to others. There is no better way to acquire this skill than by actual effort to write for publication, and the editors of *Railway Age* assure me that they are eager to offer the hospitality of these columns to accounting officers with ideas and discoveries which will augment the service and the prestige of the accounting department to the railroad industry. I commend this endeavor to you.

Coordinated Effort

Another opportunity that lies ahead of this department is to integrate its skills with those of the engineering and transportation departments so that benefits of improvements may be more accurately analyzed and predicted when still in the blueprint stage. In this way plans may be most realistically analyzed and developed and improvement programs carried out in the most logical order — doing those things first which will achieve the greatest results in relation to the capital outlays. The accounting department is best equipped to relate effects to causes and its services should be continuously utilized, not only to develop policies for the future, but to test the results of those of the past. This is particularly necessary in scrutinizing the results of capital expenditure.

Probably the judgment of managements and boards of directors is more critically tested than in any other way, whether they are aware of it or not, by what they do or don't do in the matter of improvement of their properties, in relation to its necessities and opportunities. The future capital requirements of railroads are tremendous. This fact makes it the more important to develop the accounting data on which to project those plans as maps and charts and sign-posts and guides for capital expenditures. These data can be developed only as we scrutinize methodically the results of such outlays already made on our own and other railroads. We must not only study the results of what we have done, but also analyze what we have not done — to discover errors of omission as well as of commission. We must know much more than we now do about the economic benefits in unit costs which follow reductions in grades and curves and the elimination of operating handicaps. We must learn to evaluate time as well as money, because the two are synonymous and interchangeable.

All of these and many more are tasks which lie ahead in the absorbing work of railway accountants. Problems become serious largely because we do not have a sufficient quantity of information available to answer our questions. The kind of answers which railroad managements need to an increasingly large number of questions are those which only the accounting department can provide. I hope and believe that it will rise to the full measure of its opportunity and its responsibility.



The Author

UNION PACIFIC EXPEDITES L. C. L. FREIGHT HANDLING

By P. J. LYNCH
Vice President—Operation, Union Pacific

The successful handling of less-than-carload freight depends, primarily, on the speed and care that is accorded from the time it is offered for shipment by the patron until delivery is made at destination. The patrons' conclusions as to what constitutes good railroad service are based on prompt pick-up, quick dispatch, and delivery of shipments in good order.

The Union Pacific recognized the importance of those factors in making its postwar study and plans

for handling l.c.l. traffic. Accordingly, special emphasis has been placed on providing improved pick-up and delivery service, efficient freight station and transfer operations, prompt switching and forwarding of cars, overnight service, and coordinated rail-truck service between zone break-bulk stations and intermediate freight stations.

To improve the pick-up and delivery service, a fleet of railroad-operated trucks has been established in



Contents of pick-up trucks are checked as unloaded on arrival at outbound stations. Shipments are loaded on 4-wheel trailers for movement—in tractor-powered trains—to the stowing docks

principal cities and jobbing centers. Trained truck dispatchers work closely with receiving, delivery, and on-hand clerks. Pick-up trucks operate on a regular and a call-in basis. Regular schedules are operated over routes where patrons ship daily, thus eliminating the necessity of telephone calls. Emergency pick-up is made on both regular and call-in routes by use of a driver-dispatcher call system. Pick-up schedules are designed to suit the convenience of patrons, and, at the same time, provide that trucks arrive at the freighthouses in time to permit forwarding of shipments on the same day.

Railroad P. & D. Trucks

Delivery trucks are preloaded late in the afternoon with shipments that cannot be delivered on the day of unloading, due either to city ordinance restrictions or physical conditions at the consignee's plant. Trucks depart from freight stations at approximately 8 a.m., and are redispached over various routes throughout the day until the unloading from cars is completed. Notice of arrival is given to patrons who handle their own drayage when cars with their shipments are placed, in advance of the actual unloading onto the inbound platform.

Freight station operation has been modernized and streamlined. Tractors, trailers, lift trucks, portable conveyors, and modern tools, such as barrel trucks, plate glass and crate trucks, jacks, cranes, and new type dollies, have been installed to replace two-wheel hand truck operation.

At origin stations, shipments are unloaded from street vehicles directly on rubber-tired trailers having a capacity of 2,000 lb., and equipped with roller bearings. Each trailer has two load-supporting end racks.

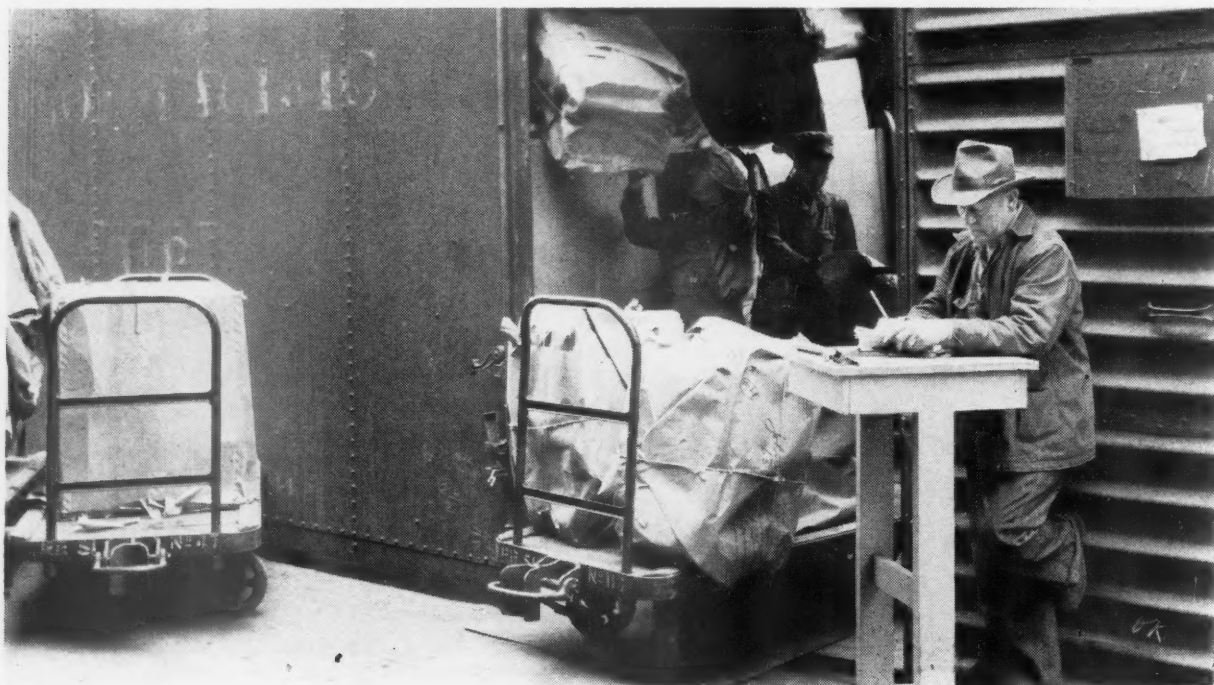
"Train-makers" stationed on receiving and transfer platforms assemble loaded trailers into trailer trains, placing trailers in the order in which set-outs are to be made. Tractors move assembled trains to the stowing docks, where distribution is made to various cars in accordance with the car block number shown on veri-check tickets affixed to the trailer rack. A train rider accompanies the train to expedite the delivery of loads at car doors, and to police possible dislodging of articles en route.

The tractor-trailer method not only obviates re-handling, but overcomes congestion at receiving and transfer platforms and speedily disposes of a large volume of traffic over comparatively long distances. It simplifies the stowing problem, in that stowers can better visualize their work with the mass delivery at cars. Stowing progresses in a more uniform manner which, in turn, facilitates the unloading operation of destination stations.

Lift trucks of varying capacities and telescopic elevator range are used to move heavy or oversize articles. They are used also to handle the palletized operation at locations where the type of freight is readily adaptable to palletized handling.

Overs and Shorts Minimized

Through the medium of the veri-check system, misloading of freight rarely occurs. Train block clerks determine the car line into which freight is to be loaded. Car block numbers are placed on shipping tickets and transfer bills which inform the receiving and check clerks how the freight is to be routed. A veri-check ticket is prepared for each shipment or article of freight. The car block number, "pro" number assigned to the shipment and other pertinent informa-



Checker and crew working on l.c.l. car at Cheyenne (Wyo.) transfer station



Left—Lift trucks are used to handle heavy or oversize freight and palletized shipments. Above—A gravity roller conveyor is used to speed unloading of a trap car at the Los Angeles (Cal.) freight station

tion are shown on the ticket, which remains with the shipment until it is stowed or disposed of otherwise. The movement of each shipment is controlled in this manner from its receipt at the receiving platform, or transfer from a car, on through each channel of the handling operation until it is ultimately stowed in an outbound car or placed in its proper location in a truck route or delivery room.

Specialized inspectors, working in conjunction with a merchandise service bureau, make daily service checks of car lines, pick-up and delivery and station-to-station truck operations, and of the general performance at freight and transfer stations. Monthly charts showing the flow of l.c.l. traffic between the principal points on the Union Pacific and those on other lines are analyzed. Where traffic volume permits, arrangements are worked out with connecting railroads to establish through l.c.l. car lines to avoid unnecessary transfer and to speed up the through movement.

Westbound traffic received through gateways at Omaha, Neb., Kansas City, Mo., Denver, Colo., and Cheyenne, Wyo., is promptly transloaded into through cars and lined up to move in manifest trains to the principal western cities. Eastbound traffic from the Pacific Northwest, California and the South-Central district, as well as traffic received from western connections, is handled in a like manner to the east.

Overnight merchandise schedules are in effect from the principal cities and jobbing centers. This service is further supplemented by over-the-road trucks plying routes between zone break-bulk and intermediate

freight stations. Coordinated rail-truck routes cover a distance of more than 2,900 mi. each day, and additional routes are to be added shortly to extend the service.

Coopering rooms at stations and transfers are equipped with the latest types of tools and machines. Pregummed sealing tape dispensers, metal strap and wire banding machines, and an assortment of various kinds of containers are in use. Open cartons and those with loose flaps, damaged containers, articles with torn wrappings, or shipments that would encounter damage en route, pass through the coopering room to be invoiced and checked and carefully prepared for reforwarding in good order.

Loss and damage committees have been organized on each division. Monthly meetings are attended by members from interested departments, including train, engine, and yardmen. Every topic relating to the handling of traffic—carload as well as l.c.l.—together with suggestions for improving present methods, are discussed and placed in line for action.

The Union Pacific's container engineer works closely with the shipping public to bring about improvements in the design and construction of containers. He also specializes in packing, loading, bracing, and the general preparation of carload and less-than-carload traffic. (The use of bulkheads in l.c.l. freight cars by the Union Pacific was described in *Railway Age* of March 6, page 57.)

Microfilming, mechanical accounting, mechanical time keeping, and automatic car weighing, are additional innovations recently adopted.



C.T.C. ADAPTED TO MEDIUM TRAFFIC

Rock Island reduces costs by equipping only half of the sidings—Average time for fast freights cut 1 hr. and drags 2 hr., on 231-mi. run

Fig. 1—Map of the C.T.C. territory

Important benefits in saving train time are being accomplished by the centralized traffic control recently completed by the Chicago, Rock Island & Pacific on 231 mi. of single track between Herington, Kan., and El Reno, Okla. On the north subdivision between Herington and Caldwell, Kan., where C.T.C. operation was placed in service first, the average running time of red-ball freight trains has been reduced 1 hr., and that of drag freights 2 hr. Of interest also is the fact that the cost of the project was reduced by adapting the system for a medium volume of traffic.

The installation was planned for traffic of about 12 to 15 trains daily, including 6 passenger trains and 6 to 9 freights. Actually, freight traffic has continued at a higher level than anticipated, so that the total number of trains daily now ranges from 18 to 22 or more. Nevertheless, the C.T.C. system is handling the trains satisfactorily and no further additions are contemplated at this time. The entire 231-mi. territory is controlled by one machine operated by the dispatcher at Caldwell, which is located near the middle of the project.

This new C.T.C. territory is a portion of a through route between Chicago and points in Texas, via Rock Island, Ill., Kansas City, Mo., Topeka, Kan., Herington, El Reno, Okla., Fort Worth, Tex., Dallas and

Houston to Galveston. Automatic signaling or centralized traffic control was already in service on the 661 mi. between Chicago and Herington, while the 1947-48 programs completed either one or the other of these forms of signaling on the 447 mi. from Herington through to Dallas.

At El Reno, this north-and-south line crosses the east-and-west line of the Rock Island which extends from Memphis, Tenn., westward through Little Rock, Ark., Oklahoma City, Okla., El Reno and Amarillo, Tex., to Tucumcari, N. M., where it connects with the Rock Island-Southern Pacific "Golden State Route" between Chicago and California. On account of the interchange at El Reno, the volume of freight traffic handled in both directions is heavier between Herington and El Reno than between there and Fort Worth. Accordingly, centralized traffic control was installed on the El Reno-Herington section, while automatic block was installed in the El Reno-Fort Worth territory.

Few Curves and Grades

Between Herington and El Reno the railroad traverses rolling prairie, with relatively few curves, most of which are less than 1 deg. Grades, for the most part, are rolling and not in excess of 0.7 per cent. Thus train speeds are not restricted on account of curvature or to any great extent by grades. The track is in good condition with heavy rail and good ties and ballast. The maximum permissible train speeds are 50 m.p.h. for freight trains, 70 m.p.h. for passenger trains consisting of conventional equipment hauled by steam locomotives, and 79 m.p.h. for "Rocket" trains hauled by Diesel-electric locomotives. The faster passenger trains average about 61.8 m.p.h. over the division, and the through freights about 34.2 m.p.h.

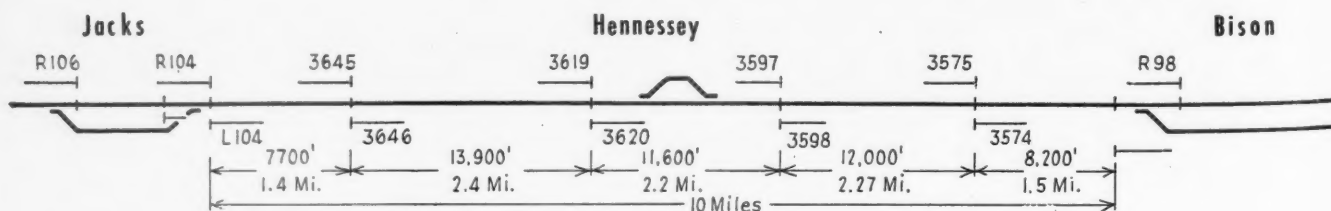
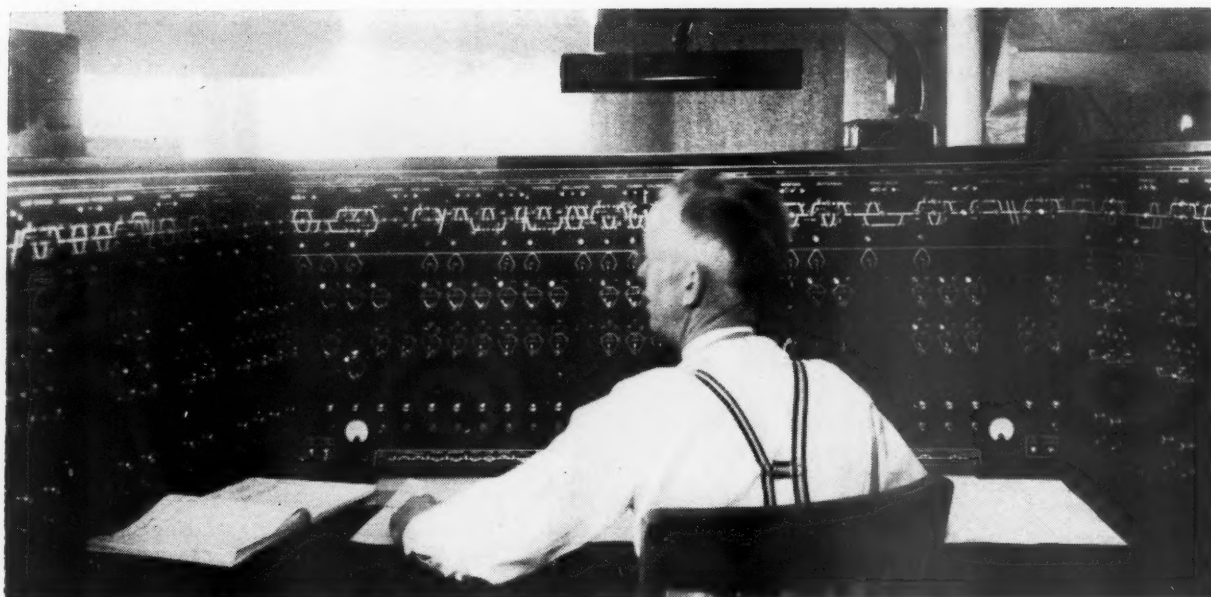


Fig. 2—Signaling between C.T.C. sidings with intervening non-equipped sidings



The 231-mi. C.T.C. territory is controlled by one dispatcher at Caldwell, Kan.

Train movements were previously authorized by timetable and train orders, no automatic block signaling being in service, and all the siding switches were operated by hand-throw stands. The sidings previously used for train meets were about 4 mi. to 4.5 mi. apart. The experience of the Rock Island on other divisions proved that C.T.C. permits traffic to be handled satisfactorily with fewer sidings. Accord-

Car Capacities of the C.T.C. Power-Equipped Sidings

Siding	Number of Cars
Lost Springs	124
Marion	92
Peabody	124
Whitewater	124
Furley	92
Cline	E 106
Cline	W 118
Wichita	Yards
Midland	146
Peck	93
Riverdale	118
Perth	93
Caldwell	Yards
Renfrow	92
Jefferson	96
Kremlin	92
Enid	191
Bison	92
Jacks	92
Kingfisher	134
Okarche	92
El Reno	Yard

ingly, on this new project, power switch machines and signals, controlled by the dispatcher, were installed at only 19 of the 34 sidings. The power equipped sidings are spaced about 9 to 12 mi. apart. Some of the intervening sidings were removed and the remainder are being left in place until experience, through a few seasons of peak traffic, determines whether some should be equipped for C.T.C. Up to now, train operation has been satisfactory with as



Train movements are authorized by signals at the power-operated sidings

many as 25 trains daily. Therefore, it is quite likely that these remaining intervening sidings can be removed, except where needed for connections to house tracks or industry spurs.

Fewer Intermediate Signals

When planning the signaling arrangements, no signals were put at the switches of the hand-throw intermediate sidings. For example, as shown in Fig. 2, there are no signals at Hennessey. The first automatic block west of Bison is only 8,200 ft., and the first one east of Jacks is only 7,700 ft., these distances being train-stopping distance plus a safe margin. Relatively short blocks such as these, in approach to a station-entering signal, permit maximum time, when a train is approaching, for the switch to be lined and the signal cleared. An advantage of the relatively short block, such as the 8,200 ft. from the leaving signal at Bison to the first intermediate signal, 3575, is that if a westbound freight is on the siding for a westbound passenger train, the freight can depart sooner because the passenger train traverses the short block in less time.

The three remaining automatic blocks between Bison and Jacks range from 11,600 ft. to 13,900., i.e., from 2.2 to 2.4 mi. The use of these three longer blocks, as compared with four about 9,370 ft. long, saves one double set of intermediate signals, and, as compared with five blocks about 7,500 ft. long, saves two double sets of intermediate signals.

The signals are of the searchlight type, and, except as explained below, each unit is capable of displaying the three standard colors—red, yellow and green. On a station-entering signal at a power switch, the mast is high enough for the upper unit to be 20 ft. above the level of the rail. The lower unit, which can display only red or yellow, is 10 ft. below the upper one. Thus the bottom unit is in the location of a third "arm," rather than of a second one. The

aspect of red in the top "arm" over yellow in the third "arm" is the Rock Island standard for Restricting, Rule 290, for a signal governing entry into a siding. The sidings are equipped with track circuits for track-occupancy indications on the control machine but the signals are not controlled through these track circuits.

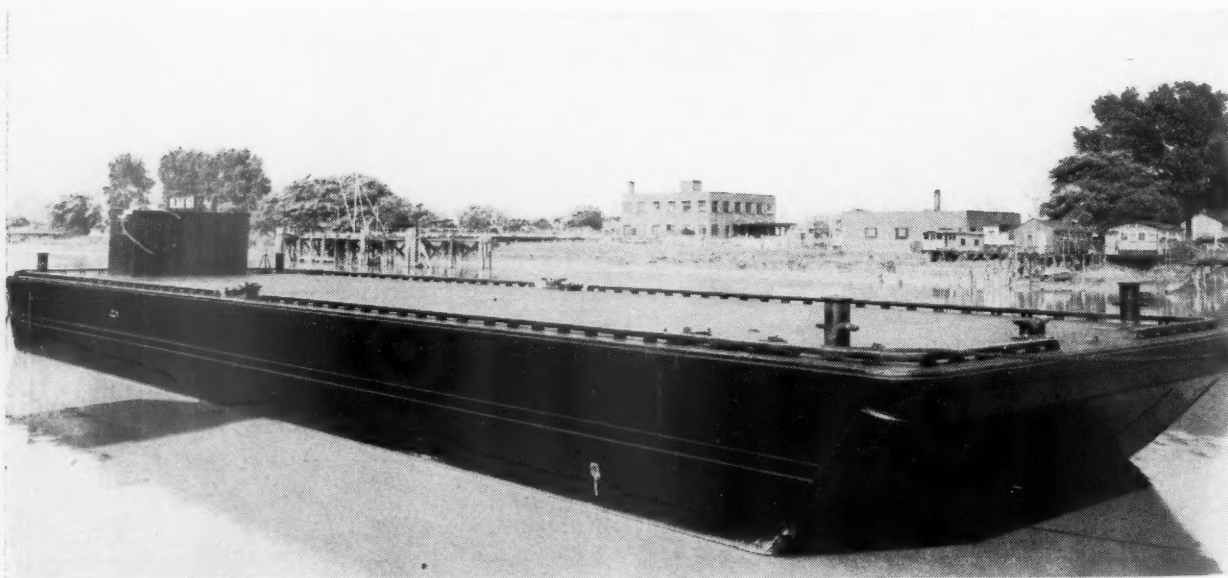
Normally De-energized Track Circuits

The track circuits between sidings are the coded type, with primary battery, arranged to feed in either one direction or the other, and are normally de-energized. The advantages of coded track circuits are that: (1) They can be longer than conventional circuits, thus eliminating or reducing the number of cut sections; (2) they can be used to control signals to three or more aspects without the use of line circuits; (3) they can be used to control electric locks on hand-throw switches without requiring line wires; (4) they can be used to check the track occupancy of a siding-to-siding block without requiring line wires; and (5) they are more economically maintained.

The advantage of the normally-de-energized feature, as applied by the Rock Island on a territory with a medium number of trains, is that it is practicable to operate the intermediate signals and track circuits between sidings from primary batteries, thereby avoiding the expense for two line wires between sidings for an a.c. power distribution circuit.

The track circuits and signals in a station-to-station block are "turned on" to feed through from siding to siding when the dispatcher is lining up to clear a station-leaving signal. The track circuit feed is in the direction opposite to the train movement.

This centralized traffic control was planned and installed by the signal department forces of the Rock Island, the principal items of signal equipment being furnished by the Union Switch & Signal Co.



Especially designed for service in the New York harbor, this welded steel deck lighter is one of 20 built recently for the Delaware, Lackawanna & Western by Dravo Corporation at its Wilmington, Del., shipyard

GENERAL NEWS

Notes Dollar Volumes Don't Make Carloads

**Gass compares drop under 1947
with sales and building figures**

Chairman Arthur H. Gass of the Car Service Division of the Association of American Railroads gives first place in his latest monthly review of the "National Transportation Situation" to a discussion of the 3.5 per cent drop in carloadings during the first 32 weeks of this year as compared with the same period of 1947. Mr. Gass found it "interesting" to check this showing against estimates that the dollar value of manufacturers' sales and new construction for the first six months of this year were, respectively, 15 per cent and 29 per cent above those of 1947's first half.

The C. S. D. chairman also notes that the national forecasts of the Regional Shippers Advisory Boards had predicted that loadings of the commodities covered, during this year's first 32 weeks, would be 3.6 per cent above those of the same 1947 period. The actual loadings of those commodities were down 2.5 per cent. This figure is different from the overall drop of 3.5 per cent because, as Mr. Gass explains, the forecasts do not cover l. c. l. and "a number of commodities in the miscellaneous classification." The l.c.l. classification was among those where the "principal decreases" occurred, the others being grain and grain products, and livestock.

Cars Released Less Promptly

Meanwhile, however, the C. S. D. chairman anticipates that demands for cars, "especially for gondolas and hoppers," will be "very heavy" with the forthcoming usual fall peak loading. Thus he warns that reductions in the detention and turn-around times of all types of cars "continue to be highly important." July reports indicated that cars detained during that month over the 48 hour free time were 16.93 per cent of the cars in possession of receivers. This compared with June's 16.51 per cent, and 15.63 per cent in July, 1947. The average turn-around time of all freight cars in July was 13.88 days, as compared with 13.26 days in June.

Mr. Gass' report on the equipment situation contains for the first time the same type of information about the locomotive situation that it has been supplying on freight cars. The C. S. D. chairman suggested that the additional information would be of interest and use "as indicating continued progress in

the renewal of locomotive equipment."

The report shows that 36,553 locomotives, including 30,978 steam, 4,879 Diesel-electrics and 696 electric, were in "serviceable ownership" as of August 1, as compared with an August 1, 1947, total of 37,572 locomotives, of which 33,054 were steam, 3,830 Diesel-electrics and 688 electric. As for new locomotives on order, Mr. Gass reports that 1,628, including 1,509 Diesel-electrics and 119 steam, were on order as of August 1, as compared with an August 1, 1947, total of 815, of which 792 were Diesel-electrics, 29 steam and 4 electric.

The report also shows that 114 locomotives, including 110 Diesel-electrics and 4 steam, were installed in July, while 762, including 730 Diesel-electrics, were installed in the first seven months of 1948, as compared with 482 in same 1947 period. The latter figure included 417 Diesel-electrics. Another table shows that 220 steam locomotives were the only locomotives to be retired last month and that 1,098 locomotives, including 1,076 steam and 13 Diesel-electrics, were retired in the first seven months of 1948, as compared with 1,499 in the comparable 1947 period. Of the latter number, 1,486 were steam and 3 Diesel-electrics.

Retirements Continue

With respect to freight car production, Mr. Gass attributes the decrease in output from 10,381 cars in June to 8,809 in July to the shortage of steel and the July 4 "holiday interference." At the same time, he notes that freight car retirements totaled 7,920 in July, only 54 less than the number of new cars installed, and that 44,717 cars were retired in the first seven months of 1948, as compared with 34,383 in the same 1947 period.

"Thus there was practically no change in total ownership during the month, but for the seven months there was a net gain of 14,175," he continues in part. "Hopper cars continue to show the best gain, 1,695 for the month, followed by covered hoppers, 397, and plain box cars, 347; all other types of equipment show varying net losses, the largest being 1,373 gondolas."

Turning to the present car supply situation, Mr. Gass reports that hopper car loadings of commodities other than coal continue to exceed the 1947 loadings, and in this connection states that 7,824,031 hoppers were loaded in the 31 weeks ended July 31, as compared with 7,716,538 in the same 1947 period. While there was a slight decrease under 1947 in coal loaded during the same period, he adds, this was more than

offset by increases reported in the loadings of ore, sand, gravel and other commodities requiring the use of hoppers. The report shows that revenue coal loadings for the first 32 weeks of 1948 totaled 5,321,869 cars, as compared with 5,437,059 cars in the same 1947 period.

As for other types of open-top equipment, Mr. Gass reports that (1) shortages of gondola cars are being reported in all sections of the country, although the loadings of gondolas in the first 31 weeks of 1948 were 4.7 per cent below the comparable 1947 total; (2) demands for flat cars continue to be "brisk," particularly for agricultural machinery and lumber movements; and (3) there has been "no relaxation" in demands for covered hoppers, the loadings of which in the first 31 weeks of 1948 totaled 210,273, an increase of 16.7 per cent over the number of covered hoppers loaded in the same period of 1947.

Box Car Demand

With respect to box cars, the C. S. D. chairman states that there has been a "further increase" in requirements for them, and that because the available supply is not sufficient to meet current demands, shortages are occurring in practically every section of the country. "It is anticipated," Mr. Gass continues, "that the situation will become tighter as heavy seasonal demands build up and there is no doubt that there will be stringencies in the supply of box cars until the peak loading period is passed late this fall."

"Harvesting of the spring wheat crop is under way generally throughout the northwestern grain belt and . . . roads in that territory are, at the present time, experiencing no difficulty in taking care of demands to the satisfaction of all concerned. As a matter of fact, conditions on the principal grain loading roads are better than they were last year at this time as evidenced by the fact that on August 14 there was a total of only 67 blocked elevators in the northwestern district as compared with a total of 635 on the same date last year. There was no grain piled up along railroad rights-of-way on August 14, whereas on that date in 1947 there was a total of 198,000 bushels stored on the ground."

Mr. Gass further reports that there has been an "ample supply" of device and equipped auto parts cars to meet demands and that the supply of stock cars is ample to take care of all current requirements except in the Southwest where severe drought conditions have stimulated the movement of livestock and thus created shortages of single-deck stock cars. He also describes the

refrigerator car supply as "easy," adding that all orders for reefers during the past month were filled promptly.

Argentine Railways To Buy Equipment

The Argentine State Railways are inquiring for 24 meter-gage steel motor coaches, 8 1.676-meter-gage steel motor coaches (both lots to be Diesel-powered), spare parts for the motor coaches, 42 meter-gage steel Diesel trains, 22 of which are for long-distance service and 20 for suburban service, and accessories for the trains, according to a recent issue of Foreign Commerce Weekly. Plans and specifications may be obtained at 200 pesos a set from the Oficina de Licitaciones, Departamento Explotacion Commercial, Ferrocarriles del Estado, Avenida Maipu No. 4, Buenos Aires, Argentina.

Railroad Employees Offered Cash in Essay Contest

Employees of approximately 30 American railroads have been invited to tell, in 500 words or less, "Why I Like to Work for My Railroad" in a nationwide essay contest sponsored by the American Railway Magazine Editors' Association. Each road will conduct a preliminary contest to select three winners to compete in the national contest which closes November 15. Prizes offered by the association are: \$1,000, first; \$250, second; and \$100, third. Cash prizes of various amounts also are being offered by the individual railroads to their local winners.

Fire Damages C.N.R. Freight Terminal in Montreal

A fire caused by an explosion in the Bonaventure freight terminal of the Canadian National at Montreal, Que., on August 23 completely destroyed two freighthouses and heavily damaged 130 freight cars and their contents and the local freight office. Temporary facilities have been set up and the handling of less-than-carload freight has not been seriously affected.

Benefit Payments Up Slightly

Retirement and survivor benefit payments under railroad retirement legislation continued to rise in May, amounting to \$19,557,000, or \$220,000 more than in the previous record month of April, according to the July issue of the Railroad Retirement Board's "Monthly Review." Lump-sum payments alone failed to match the increases recorded for all other major types of benefits. May awards of retirement annuities (2,880) and monthly survivor benefits (5,728) were, respectively, 591 and 1,440 higher than those in the previous month. On May 31 there were 316,465 monthly benefits in current-payment status, a net increase of 5,481 for the month.

In contrast, declines were recorded under the unemployment and sickness insurance programs. Benefit payments for unemployment numbered 103,203 and totaled \$2,906,000, or 22 and 23 per cent, respectively, below that of April. Applications and claims were, respectively, 85 and 31 per cent lower than during the previous month.

The 14,347 applications received under the sickness insurance program was the smallest number recorded since the program began July 1, 1947. Payments amounted to \$2,162,000, as compared with \$2,593,000 during April.

Officers' Reserve Corps Offers Commissions to Experts

Civilians possessing either professional or technical qualifications which are "critically essential and immediately adaptable" to the needs of the Army may get direct appointments in the Officers' Reserve Corps, according to a new policy of the Department of the Army. The commissioning of specialists is intended to provide a continuing source of officers in fields in which it is not feasible or economical for the Army to give training. Included in the list of 75 fields from which the Army seeks to obtain experts are railroad administration, water service and maintenance and various branches of engineering.

Facts Best Weapon for Capture Of Traffic—a Correction

The meaning of a portion of the article, "Facts Best Weapon for Capture of Potential Traffic," in *Railway Age* of July 31, was distorted by a printer's error in the paragraph on page 35 beginning "A study of passenger traffic . . ." The last sentence in that paragraph should have read: "At the same time, the year's increase in passengers on the air line dropped from 51 per cent in 1939 to 11 per cent in 1941."

Burlington Will Modernize 85 Coaches For Suburban Service

Sixty all-steel suburban cars and 25 main-line coaches will be rebuilt and modernized for suburban service by the Chicago, Burlington & Quincy in a program now under way and which will continue at the rate of three cars per month. Improvements will include modified air-conditioning, new seats or upholstery, improved lighting and complete interior redecoration. All of the modernized cars will have enclosed vestibules to check smoke, cinders and dust and will be painted to simulate stainless steel.

In addition, the road is considering the purchase or construction of 25 or 30 new suburban coaches of the latest design for replacement of cars which will be retired, Ralph Budd, president of the Burlington, announced. Specifications for these new cars—to be assigned to the Chicago-Aurora, Ill.,



RAILROAD FAIR RECEIVES STATUES INTENDED FOR 1892-93 EXPOSITION — During "Grand Trunk Western Day" at the Railroad Fair in Chicago on August 19, C. A. Skog (left), vice-president and general manager of the Grand Trunk Western, presented to Major Lenox R. Lohr, president of the fair, two white Italian marble statues owned by the road. With the presentation went the story as to how the company came into possession of the pieces, which are a statue of Napoleon and a bust of the Italian poet Bruno. Fifty-five years ago the Italian government sent the two sculptures to this country to be exhibited at the World's Columbian Exposition, 1892-93, in Chicago. While in transit the pedestal bases of the pieces were damaged slightly, resulting in a claim payment by the road which gave it ownership of the statues. They have been stored until recently in its Battle Creek (Mich.) freighthouse.

service—have not been completed, but will include many innovations in suburban car construction. It is expected that deliveries will require two years.

The first two modernized coaches are to be turned out of the road's Aurora coach shop soon for service on the Chicago-Aurora trains. One of the cars, a modernized main-line coach, will demonstrate three different types of seats on which passenger reaction will be sought as a guide to the permanent type of seating for subsequent cars. Because of the continuous opening of car doors in suburban service, the air-conditioning on the cars is not intended fully to duplicate that on through trains. It is expected, however, to keep the car interiors as cool as or cooler than outside temperatures.

Railroads and Non-Ops to Begin Talks at Chicago on September 8

Negotiations will get under way at Chicago on September 8 between representatives of the railroads and the sixteen non-operating railroad unions, concerning the latter's demands for a reduction of the work week from 48 to

40 hours, without any reduction in straight time earnings on the existing basis, plus an increase of 25 cents in the rate of pay per hour. The unions served notice of their latest demands on the carriers on April 10. In addition to these basic objectives, the brotherhoods are seeking other costly changes in rates of pay and working agreements. (See *Railway Age* of April 17, page 54.)

N.Y.C. Employees Hear Metzman, Other Officers at Railroad Fair

The foreseeable future of the railroads holds "dazzling promise," with new types of locomotives in the experimental stage and on the drawing boards, Gustav Metzman, president of the New York Central System, told the road's employees who attended the Railroad Fair in Chicago on August 20. Mr. Metzman and other N.Y.C. officers spoke at a gathering celebrating "New York Central Day."

The speaker observed that these new-type locomotives may eventually succeed Diesels and in turn may sometime be succeeded themselves by atomic-powered locomotives. The railroads have grown up, but they remain vigorously youthful and useful, said Mr. Metzman. He pointed out that more advances—lightweight streamlined cars, Diesel power, air conditioning and others—have been made in passenger transportation during the past 15 years than in any previous similar period. The railroads, he added, are also passing from the era of open-section sleeping cars to the all-room sleepers with their privacy and many other new features.

In a brief talk preceding that of Mr. Metzman, L. W. Horning, vice-president of personnel and public relations, emphasized the important role played by N.Y.C. employees in the progress and achievements of the road. Referring to the railroad's large employee training program, he declared that the "value of all our wonderful, breathtaking scientific and mechanical developments is determined precisely by the people who use them."

Railroad Fair Attendance Exceeds All Expectations

Major Lenox R. Lohr, president of the Railroad Fair at Chicago, emphasized this week that it will continue through September, as was announced in *Railway Age* of July 24. Attendance has exceeded all expectations since its opening on July 20, with a total of approximately 1,600,000 paid admissions to the grounds through August 25. The "Wheels A-Rolling" pageant has played to capacity audiences four times daily, seven days a week, for a total of some 600,000 paid admissions.

"No public exposition ever undertaken by an industry has come near the Railroad Fair in the eager and en-

AIR LINES DISAGREE OVER PROPOSED FARE INCREASE

An intra-industry dispute has developed with respect to the proposed 10 per cent increase in air passenger fares which was decided upon at last week's Washington, D. C., meeting between members of the Civil Aeronautics Board and representatives of the air lines. The dispute was revealed this week when American Airlines announced that it does not approve all provisions of the fare-increase "agreement." The C.A.B. has minimum-rate powers and could thus require all lines to make the proposed increases.

American objects to the "agreement" in that it would be required to raise by 10 per cent the present 6 cents per mile rate now effective on so-called "luxury" planes—the DC-6 and Constellation. Such craft also are used by other carriers, which would apply the proposed increase. The present rate on all other types of planes is approximately 5½ cents per mile.

American, however, seeks to abandon such a rate differential and proposes instead to equalize the fare structure on the basis of six cents per mile by raising all rates except those pertaining to the present "extra-fare" DC-6 and Constellation. Any general increase beyond the level of 6 cents per mile, American contends, would place its fare structure in the area of diminishing return.

Results of the "agreement" were announced after the meeting on August 19 by J. J. O'Connell, Jr., chairman of the C.A.B. As reported in *Railway Age* of August 14, page 76, the conference had been called by the C.A.B. in order to consider the "necessity for an industry-wide passenger fare increase" and other "revenue producing possibilities, such as charges for meals and 'promotional' tariffs."

Mr. O'Connell reported that the carriers present at the meeting failed to agree

unanimously that the proposed fare increase would eliminate or reduce operating losses, which amounted to \$20,900,000 in 1947. Eastern Air Lines, he added, was the only carrier to show a profit last year.

The C.A.B. chairman also stated that no decision was reached with respect to charging passengers for meals served en route, a service which cost the air lines \$11,000,000 in 1947. The C.A.B., he said, favors the elimination of free meals and will rule on the question upon the completion of further studies.

The chairman added that it was suggested by one carrier that the charge for meals be made part of an over-all "service fee" that would cover the cost of such items as baggage handling, stewards and transportation to and from airports.

Mr. O'Connell also said that the board favored the establishment of "promotional" fares, such as the proposed tariff filed by American providing for a "family rate" for travel on Mondays, Tuesdays and Wednesdays. Under this plan, the head of the family would pay the full fare and those traveling with him could ride for half-fare. United Air Lines and Transcontinental & Western Air, meanwhile, have announced their intentions to offer a 5 per cent discount on round-trip fares.

Because of the lack of time, Mr. O'Connell said, other matters listed for consideration—such as over-scheduling and cost reduction possibilities through consolidation of ticket offices—were not discussed in detail. Air line officers, he added, have been asked to study such problems and submit their recommendations to the board.

Meanwhile, as reported in *Railway Age* of August 21, page 62, the Reconstruction Finance Corporation, at the request of President Truman, is making a study of the "general financial situation" of the "air transportation industry."

Tie Renewals—a Correction

There was a decline of 0.76 per cent in tie renewals by Class I railroads in 1947, as compared to 1946. A printer's error resulted in the confusing statement in *Railway Age* of August 7, page 28, that there was an increase of that proportion, although the head and context indicated that renewals in 1947 were below 1946.

Roadmasters, B.&B. Men Meet At Chicago, September 20-22

The Roadmasters' and Maintenance of Way Association and the American Railway Bridge and Building Association will hold their annual meetings concurrently at the Hotel Stevens, Chicago, September 20 to 22, inclusive, as previously reported in *Railway Age*. Each group will have a separate program, but on several occasions during the three-day period joint sessions or other activities have been scheduled.

The two associations will convene in



This aerial view of the Railroad Fair at Chicago is evidence of its pleasant location along the lake front. Grandstand and stage for the pageant "Wheels-A-Rolling" are, in the center of the picture. The general track exhibit is to the left, foreground.

a joint opening session on Monday morning, September 20, to be called to order at 10:00 a.m. (Chicago daylight saving time). The opening address will be delivered by J. H. Aydelott, vice-president, Operations and Maintenance Department, Association of American Railroads.

The second joint event will be an afternoon session on Tuesday to hear two addresses on subjects of mutual interest. O. H. Carpenter, general roadmaster of the Union Pacific, will speak on Safety Problems as Affected by Diesel Operation and the Increased Mechanization of Maintenance Work, and A. E. Perlman, general manager of the Denver & Rio Grande Western, will talk on How the Roadmaster and Bridge and Building Supervisor Can Help Hold Down Maintenance Costs.

On Tuesday evening there will be a joint annual banquet in the hotel's Grand Ballroom. The final joint affair will be a trip to the Railroad Fair on Wednesday afternoon. In recognition of this occasion, Wednesday has been designated "Roadmasters' and Bridge and Building Supervisors' Day" at the Fair.

The program of the roadmasters' meeting is as follows:

- Monday, September 20*
- 11:00 a.m.—Address by President A. B. Chaney
 - 11:20 a.m.—Report of Committee on Use of Work Equipment at Derailments and in Coping with Other Emergencies—P. S. Settle, chairman (trk. supvr. P.R.R., Perryville, Md.)
 - 2:00 p.m.—Award of Honorary Membership Certificates
 - 2:10 p.m.—Report of Committee on Modern Methods of Controlling Vegetation and Woody Plants—A. E. Botts, chairman (asst. ch. engr. maint., C. & O., Richmond, Va.)
 - 2:40 p.m.—Address on Sand Methods of Stabilizing Roadbed, by G. L. Sittton, assistant chief engineer, Southern, Washington, D. C.
 - 3:15 p.m.—Adjournment to Exhibit

Tuesday, September 21

 - 9:30 a.m.—Report of Committee on Reducing Rail Joint Maintenance—R.R. Manion, chairman (enr. m.w., G.N., St. Paul, Minn.)
 - 10:20 a.m.—Address on Rail Joint Bar Design, by G. M. Magee, research engineer, Engineering division, A.A.R., Chicago
 - 11:10 a.m.—Report of Committee on Functions and Responsibilities of Section Gangs—H. C. Fox, chairman (div. engr., Southern, Greensboro, N. C.)
 - 3:15 p.m.—Report of Committee on Educating Track Employees in the Cost of Materials, Tools and Equipment—E. L. Anderson, chairman (asst. ch. engr., St. L.-S.F., Springfield, Mo.)
 - 4:00 p.m.—Adjournment to Exhibit

Wednesday, September 22

 - 9:30 a.m.—Report of Committee on Keeping Power and Spring Switches in Operation During Winter Storms—A. B. Hutson, chairman (rdm., C.B. & Q., Galesburg, Ill.)
 - 10:15 a.m.—Address on Snow Fighting in Canada, by J. W. Risk, superintendent

of work equipment, Canadian National, Toronto, Ont.

11:00 a.m.—Business session

The schedule of events for the separate sessions of the B.&B. group follows:

Monday, September 20

- 11:00 a.m.—Address by President J. S. Hancock
- 11:20 a.m.—Report of Committee on Good Housekeeping to Promote Safety and Fire Prevention—H. E. Skinner, chairman (supt. scales & wk. equip., E.J. & E., Joliet, Ill.)
- 2:00 p.m.—Award of Honorary Membership Certificates
- 2:10 p.m.—Report of Committee on Protection to Bridges over Navigable Streams—A. E. Bechtelheimer, chairman (br. engr., retired, C. & N.W., Winnetka, Ill.)
- 2:40 p.m.—Report of Committee on Types of Bridges for Replacing Timber Trestles—F. M. Misch, chairman (gen. b. & b. supvr., S.P., San Francisco, Cal.)
- 3:10 p.m.—Report of Committee on Enlarging and Relining Tunnels for Present-Day Traffic—C. M. Eichenlaub, chairman (res. engr., S.D. & A.E., San Diego, Cal.)

3:45 p.m.—Adjournment to Exhibit

Tuesday, September 21

- 9:30 a.m.—Report of Committee on Housing Bridge and Building Employees—W. W. Caines, chairman (asst. supvr. b. & b., C. & O., Huntington, W. Va.)
- 10:20 a.m.—Address on the Protection of Wood in Railway Bridges and Buildings, by George M. Hunt, director, Forest Products Laboratory, Forest Service, U. S. Dept. of Agriculture, Madison, Wis.
- 11:10 a.m.—Report of Committee on Recent Developments in Fuel Oil Storage and Servicing Facilities for Diesel and Oil-Burning Locomotives—H. E. Michael, chairman (assoc. ed., *Railway Age*, Chicago)
- 3:15 p.m.—Address: If the Railroads Are Not Securing Good Concrete—Why?, by Dr. Ruth D. Terzaghi, Winchester, Mass.
- 3:45 p.m.—Motion picture, "Mortar and Glass"—a production of the American Structural Products Company—a subsidiary of Owens-Illinois Glass Company
- 4:00 p.m.—Adjournment to Exhibit

Wednesday, September 22

 - 9:30 a.m.—Report of Committee on Sanitary Facilities and Appurtenances for Railway Buildings—L. C. Winkelhaus, chairman (asst. supt. w.s., I.C., Chicago)
 - 10:15 a.m.—Report of Committee on Eliminating Waste of Water—E. R. Schlaf, chairman (asst. supt. w.s., I.C., Chicago)
 - 11:00 a.m.—Business session

Car Builders Fear "Repercussions" From W.A.A.-Kaiser-Frazer Deal

The American Railway Car Institute has asked two congressional committees to inquire into the "possible repercussions" upon the freight car building program which may result from the lease by the War Assets Administration to the Kaiser-Frazer Corporation of a government-owned \$28,000,000 blast furnace in Cleveland, Ohio, effective September 1. The plant is now being operated by the Republic Steel Corporation for the manufacture of pig iron, an essential commodity in the freight car construction program. Republic's lease expires August 31.

Hearings on the transaction between the W.A.A. and Kaiser-Frazer opened this week in Washington, D. C., before the Senate special committee to study problems of American small business, headed by Senator Wherry, Republican of Nebraska, and a subcommittee of the House committee on expenditures in the executive departments, of which Representative Bender, Republican of

Ohio, is chairman. The institute's views were set out in a telegram from its president, S.M. Felton, to Senator Wherry. The institute, Mr. Felton said, has been advised by some of its members and suppliers of certain parts essential to the construction of freight cars, such as cast iron wheels and air brakes, that they have been dependent upon pig iron flowing from Republic and that "a stoppage or curtailment of this supply might seriously affect their abilities to make deliveries."

"Obviously," Mr. Felton continued, "we cannot have full information upon the economic implications of this change in management of the blast furnace. We are aware, however, of your interest in helping the railroads to strengthen their operations by adding new cars as promptly as possible, and we suggest that your committee might insure that no curtailment of pig iron for the freight car program is permitted."

Mr. Felton also pointed out that the freight car building industry and the railroads for the past two years have been making "every effort" to attain and maintain a constant monthly output of 10,000 new cars. "This effort," he added, however, "has been retarded by shortages of materials, particularly steel. Pig iron also has been in short supply."

Meanwhile, it was learned from the Office of Defense Transportation that Republic has been contributing 15 per cent of the pig iron required for the freight-car program.

F.T.C. Condemns Another Freight-Equalization Plan

The Federal Trade Commission has issued an order calling upon the crown-bottle-cap industry to "cease and desist" from various pricing practices which include the absorption of freight rates. The decision, in Docket No. 4602, is a further extension of the commission policy indicated in its earlier order against the cement industry, which has been upheld by the United States Supreme Court (see *Railway Age* of May 1, page 55).

The present order runs against the Crown Manufacturers Association, its officers and directors, and 12 manufacturers of bottle caps. It requires them to "cease and desist" from "any planned common course of action" to do any of six things, including "quoting or selling crown bottle caps at prices calculated or determined pursuant to or in accordance with any freight-equalization plan, system, or formula which results in uniform delivered prices at any given destination, or which deprives purchasers of an opportunity to obtain some advantage in price or more favorable terms or conditions from one of the corporate respondents than from another."

In its "findings as to the facts" the commission says that substantially all crown bottle caps are sold f.o.b. point of manufacture; but it adds that "for a

number of years, however, each of the respondent manufacturers has followed the practice of equalizing freight on all of its sales with the location of the factory of any other respondent manufacturer which happens to be nearer the purchaser than the seller's factory."

"Under the freight-equalization plan," the report continues, "it is customary for a purchaser to pay the freight, but the manufacturer making the sale either credits the purchaser upon the invoice or otherwise allows him the difference between the actual freight rate to the purchaser's location from the manufacturer-seller's location and the rate to such purchaser's location from the location of the manufacturer located nearest to such purchaser. Under such a system it is obvious that if the f.o.b. factory price of the manufacturer-seller is the same as the f.o.b. factory price of the manufacturer located nearest the purchaser, the ultimate price to be paid by the purchaser will be the same regardless of which of the manufacturers makes the sale. In the crown bottle cap industry that is always true."

As noted in the *Railway Age* of August 7, page 40, a special Senate committee headed by Senator Capehart, Republican of Indiana, is investigating the effect of the Supreme Court's decision in the cement case. The implications of the F.T.C.'s policy as a threat to railroad traffic were discussed in the August 14 issue's leading editorial. Senator Capehart announced this week that the effect of the cement-case decision "is showing up in the heavy mail" reaching his committee which has been designated the Senate Committee on Trade Policies.

"These letters, the majority of which are concerned with industries other than cement, come from every section of the country," the senator continued. "Most of the communications received thus far are critical of the decision. Only one letter in favor of the decision has reached the committee and two requests to testify in favor of the ruling have been received. All other letters and requests to testify express the opposite view. No doubt this is natural, since when somebody feels injured by a federal ruling he is more likely to write than is a person who feels benefited. Our job is to inquire into and weigh the effects on both; on every segment of the population and on the national economy as a whole."

Barriger, Connolly, Henry To Address Treasury Officers

John W. Barriger, president of the Chicago, Indianapolis & Louisville, R. E. Connolly, vice-president of the Illinois Central, and Robert S. Henry, vice-president of the Association of American Railroads, will be speakers at the thirty-seventh annual meeting of the A.A.R. Treasury Division, which will be held September 13-15 at the French Lick Springs Hotel, French Lick, Ind. Other addresses will be those of divi-

sion officers—Chairman Harry Hurst, assistant treasurer of the Pennsylvania and Vice-Chairman J. M. Salter, treasurer of the Kansas City Southern—and an informal talk by E. H. Bunnell, A.A.R. vice-president in charge of the Finance, Accounting, Taxation and Valuation Department.

Messrs. Barriger and Connolly, the latter being the chairman of the A.A.R.'s Accounting Division, will address the meeting's opening sessions when the program also calls for an address of welcome by Governor Ralph F. Gates of Indiana. Colonel Henry and Mr. Salter will speak at the September 14 sessions, while Chairman Hurst and Mr. Bunnell will be heard at the closing session on the following day. Other proceedings of the meeting will include reports of the division's standing committees and sectional groups. Also, there will be an exhibit staged by manufacturers of business machines and office equipment. V. A. Hewitt, treasurer of the Monon, is chairman of the committee on arrangements for the meeting.

Chicago Railroads Make Report On Proposed Passenger Terminal

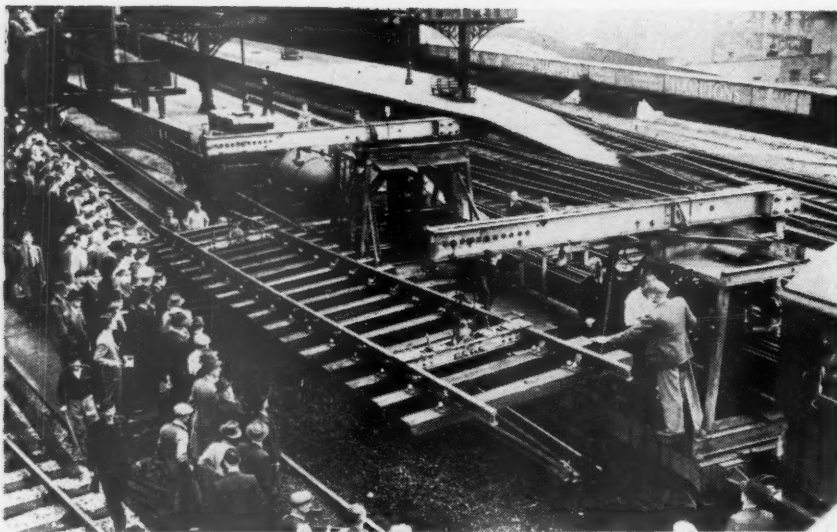
A complete and comprehensive report summarizing two and a half years' study of the financial and engineering problems which would be involved in the erection of modern passenger facilities on Chicago's South Side, was rendered to Mayor Martin H. Kennelly on August 27 by the South Side Railroad Terminal Committee. The committee is composed of railroad presidents and is headed by Fred G. Gurley, of the Atchison, Topeka & Santa Fe.

The contents of the report to Mayor Kennelly had not been released as this issue of *Railway Age* went to press, but it was expected to reemphasize the committee's contention that the \$100 to \$200 million required for the new terminal is more than the railroads can afford. The project would replace the Illinois Central, Dearborn, Grand Central and La Salle Street stations.

Emergency Board Reconvened In Pennsylvania Dispute

President Truman has reconvened an emergency board for further proceedings in the rules dispute between the Pennsylvania and the Brotherhood of Locomotive Firemen & Enginemen which the board's report of June 9 has failed to settle. The President acted on the recommendation of the National Mediation Board when the continuing controversy threatened to result in a strike; and the board began its new series of meetings with the parties at Philadelphia, Pa., on August 23.

The railroad has agreed to accept the recommendations of the board's report; but the union has refused to take all of that recommendation which interpreted one of the rules in issue as requiring the P.R.R. to employ "firemen"



The whole of the track adjacent to platform No. 5, Waterloo station, was relaid during the period from 11 a.m. to 3 p.m. by the Southern Railway, England

or "helpers" on light Diesel-electric locomotives in yard service, but then went on to say that the P.R.R. should get the benefit of any more favorable national rule to which the brotherhood may be a party in the next general Diesel agreement. The latter provision is the one to which the union objects.

Members of the board are Chairman Andrew Jackson, James H. Wolfe, and E. Wight Bakke. Their original report was noted in *Railway Age* of June 19, page 55.

Railroad Men Elected by Controllers Institute

John A. Tauer, controller of the Great Northern, has been elected a director of the Twin Cities chapter of the Controllers Institute of America. Joseph T. Mahaney, controller of the Missouri-Kansas-Texas, recently was renamed a director of the institute's St. Louis, Mo., chapter, and Hugh J. Ward, assistant controller of the Pennsylvania, was reelected a director of the Philadelphia, Pa., chapter.

N. Y. C. Issues Guidebook For New Employees

The New York Central System has issued a 48-page illustrated guidebook for all new employees. Prepared under the direction of L. W. Horning, vice-president, personnel and public relations, the booklet discusses such subjects as working conditions and pensions and offers a summarized history of the company as well as some of the basic economics of the railroad business. "The more you know about us," the guidebook says, "the easier it will be for you to get on the right track and stay there. That's the reason for this booklet. It answers questions nearly every new employee has in his mind. It tells you many of the things you want to know about your new job." Emphasis

is put on the "Central idea for success"—that is, "courtesy and service."

Kansas Intrastate Rates

The Interstate Commerce Commission has instituted an investigation into the refusal of the Corporation Commission of Kansas to authorize railroads operating within that state to apply intrastate freight increases in line with the increases in interstate rates authorized in Ex Parte 162 and Ex Parte 166. The investigation, sought by the railroads (see *Railway Age* of July 31, page 47), is docketed as No. 30035. It has been assigned for hearing at Topeka, Kans., on October 19, before Examiner J. P. McGrath.

Business-School Cooperation To Be Theme of Exposition

Cooperation by the supervisors of industrial and business management with the supervisors of education to build a better bridge between school and job will be the theme of the Education Methods and Equipment Exposition to be held in the Hotel Essex House, Newark, N. J., October 19-22, under the sponsorship of the Herbert D. Hall Foundation. The exhibitors will include those companies or organizations desiring to demonstrate an education method, equipment or service which forms part of the bridge between school and job. The program includes a series of technical sessions, panel discussions and other group meetings, all planned to promote training-in-industry activities.

Loss and Damage—a Correction

In the report in *Railway Age* of August 14, page 77, of a meeting of railroad and shipper representatives to consider ways to reduce freight claims, there was a typographical error in the amount involved. The railroads' most recent annual claim bill is \$122,215,948.

Representation of Employees

The Order of Railroad Telegraphers has been certified to represent telegraphers employed by the Beaver, Meade & Englewood as the result of a check of representation authorizations conducted by the National Mediation Board. The employees involved formerly were not represented by any organization.

Freight Car Loadings

Loadings of revenue freight in the week ended August 21 totaled 900,572 cars, the Association of American Railroads announced on August 26. This was an increase of 9,295 cars, or 1.0 per cent, above the preceding week, a decrease of 323 cars, or 0.03 per cent, under the corresponding week last year, and an increase of 15,617 cars, or 1.8 per cent, above the equivalent 1946 week.

Loadings of revenue freight for the week ended August 14 totaled 891,277 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loadings For the Week Ended Saturday, August 14			
District	1948	1947	1946
Eastern	155,643	157,847	161,318
Allegheny	183,202	187,456	190,209
Pocahontas	75,786	75,540	73,288
Southern	134,835	128,087	131,147
Northwestern	140,879	146,405	134,910
Gen. Western	133,683	144,028	132,925
Southwestern	67,249	68,942	63,756
Total Western Districts	341,811	359,375	331,591
Total All Roads	891,277	906,305	887,553
Commodities:			
Grain and grain products	54,331	63,020	50,309
Livestock	10,207	11,722	15,735
Coal	190,963	174,541	181,006
Coke	14,805	13,918	13,635
Forest prods.	53,361	48,496	51,612
Ore	76,810	82,752	73,701
Merchandise			
I. c. l.	105,384	115,260	119,616
Misc.	385,416	396,596	381,939
August 14	891,277	906,305	887,553
August 7	878,901	905,244	899,086
July 31	894,381	921,591	898,391
July 24	882,566	919,928	910,513
July 17	892,527	919,735	921,496

Cumulative total,
33 weeks 26,719,978 27,678,721 25,107,758

Will Probe Space-Reservation Practices of Pullman and Roads

Railroad and Pullman Company rules, regulations and practices governing the reservation, sale and redemption of sleeping car, parlor car and reserved-seat coach tickets will be investigated by the Interstate Commerce Commission. This was revealed on August 26 when the commission made public an order, dated July 6, in which it instituted the investigation on its own motion.

The order makes the Pullman Company and all Class I railroads respondents to the proceeding, which is docketed as No. 30031. It also states that hearings will be held at a time and place to be hereafter fixed by the commission.



a *unit* *of* **POWER**

THIS locomotive is a unit of power. It illustrates a significant fact. Where the amount of power that can be packed into a single unit is important—where you want 6000, 8000, even 10,000 horsepower in one engine—the steam locomotive is unchallenged.

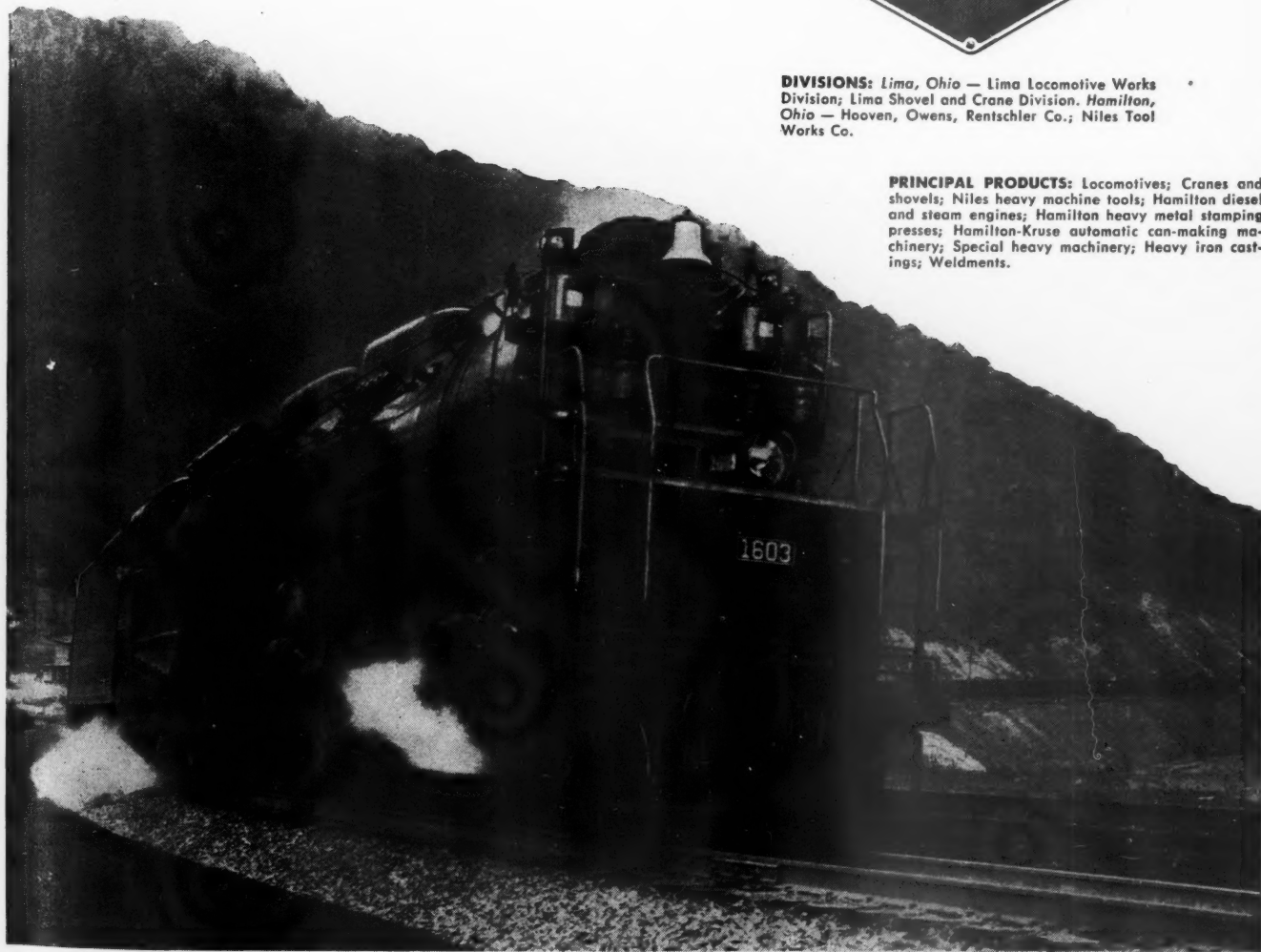
We build such locomotives—steam locomotives like this that have developed 8,000 horsepower and can do more. We will continue to do so. They are fine pieces of machinery. Modern in every respect, they are establishing remarkable records for economy, reliability and low maintenance.

Don't sell these steam giants short. They have their place—and in their place are unsurpassed.



DIVISIONS: *Lima, Ohio* — Lima Locomotive Works Division; Lima Shovel and Crane Division. *Hamilton, Ohio* — Hooven, Owens, Rentschler Co.; Niles Tool Works Co.

PRINCIPAL PRODUCTS: Locomotives; Cranes and shovels; Niles heavy machine tools; Hamilton diesel and steam engines; Hamilton heavy metal stamping presses; Hamilton-Kruse automatic can-making machinery; Special heavy machinery; Heavy iron castings; Weldments.



SUPPLY TRADE

James Boyd, formerly eastern district manager of the Westinghouse Electric Corporation, has been appointed general sales manager of the Lima-Hamilton Corporation's Hamilton division. A native of Edgewater, N. J., Mr. Boyd now lives in Summit, N. J. He was graduated from Pratt Institute in 1917 and joined Westinghouse the same year



James Boyd

as service engineer. In 1920 he went into the firm's New York office as a salesman in the general industry section. Five years later he was promoted to supervisor of the general mill section and in 1935 he became eastern industrial manager. Mr. Boyd was made assistant eastern district manager in 1937 and eastern district manager in 1938.

Sheldon Thomas, assistant to Robert W. Ward, vice-president in charge of production of the American Car & Foundry Co., has been appointed assistant district manager of the firm's Chicago plant.

William R. Bajari, formerly a field manager for the Eutectic Welding Alloys Corporation, has been appointed regional sales supervisor in the western region of the United States. L. D. Richardson and Robert H. Groman, formerly assistants to the general sales manager, have been appointed regional sales supervisors for, respectively, the south central region and the west central region.

The formation of a new department of the Minneapolis-Honeywell Regulator Company to supervise and coordinate advertising, merchandising and sales promotion activities has been announced. John R. Bergan, formerly eastern regional sales manager for the company's Moduflow division, has been appointed head of the new department as merchandising manager. He will move his headquarters from New York to the home office in Minneapolis, Minn. Other personnel changes include the promotions

of Chandler Murphy to advertising manager and John A. Young to sales promotion manager. Mr. Murphy succeeds William B. Walrath, resigned.

Walter E. Mackley has been appointed manager of the New York district sales office of the American Steel & Wire Co., a subsidiary of the United States Steel Corporation. F. L. Nonnenmacher has been appointed manager of manufacturers' products sales to succeed Mr. Mackley, and Harold Christopher has been promoted to assistant manager. Mr. Mackley succeeds B. W. Bennett, who has been appointed assistant to the vice-president-sales. Mr. Bennett will continue to maintain his offices in New York will handle special assignments.

John P. McWilliams has been elected chairman of the Youngstown Steel Door Company. Harold H. Henricks has been elected president to succeed Mr. McWilliams.

The B. F. Goodrich Company has announced it will build a new plant in Akron, Ohio, for the manufacture of industrial rubber belting. Four factory buildings will be razed to permit construction of the new plant, which will contain 150,000 sq. ft. of floor space. Work is scheduled to start this month.

S. Wayne Hickey, vice-president of the Simmons-Boardman Publishing Corporation and heretofore district manager of advertising sales, transportation papers, with headquarters at Chicago, has been named vice-president, advertising sales, transportation papers, a newly-created position. Mr. Hickey will have offices in both Chicago and New York. C. Miles Burpee, vice-president of the corporation in general charge of advertising sales on the transportation papers, has been



S. Wayne Hickey

named vice-president, sales promotion and service, transportation papers. His headquarters will be at New York as heretofore. He will continue also as business manager of *Railway Age* and will be publicity director of the company's transportation cyclopedias. John

R. Thompson, formerly vice-president and treasurer of the Maclean-Hunter Publishing Corporation, with headquarters at Chicago, has been appointed district manager of advertising sales, transportation papers, at Chicago, succeeding Mr. Hickey.

Mr. Hickey was born at Camden, Ark., on December 7, 1905, and received his higher education at the University of Arkansas. He entered railway service in April, 1925, as a gravel and ballast inspector of the Illinois Central, subsequently serving as chairman, rodman and valuation accountant on that road. In April, 1931, he became associated with Simmons-Boardman in the circulation department at Chicago, and in December, 1936, he was advanced to advertising sales representative. Mr. Hickey was promoted to business manager of Railway Engineering and Maintenance and western

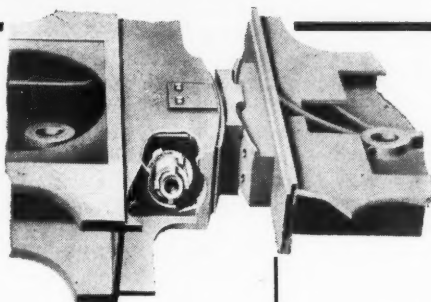
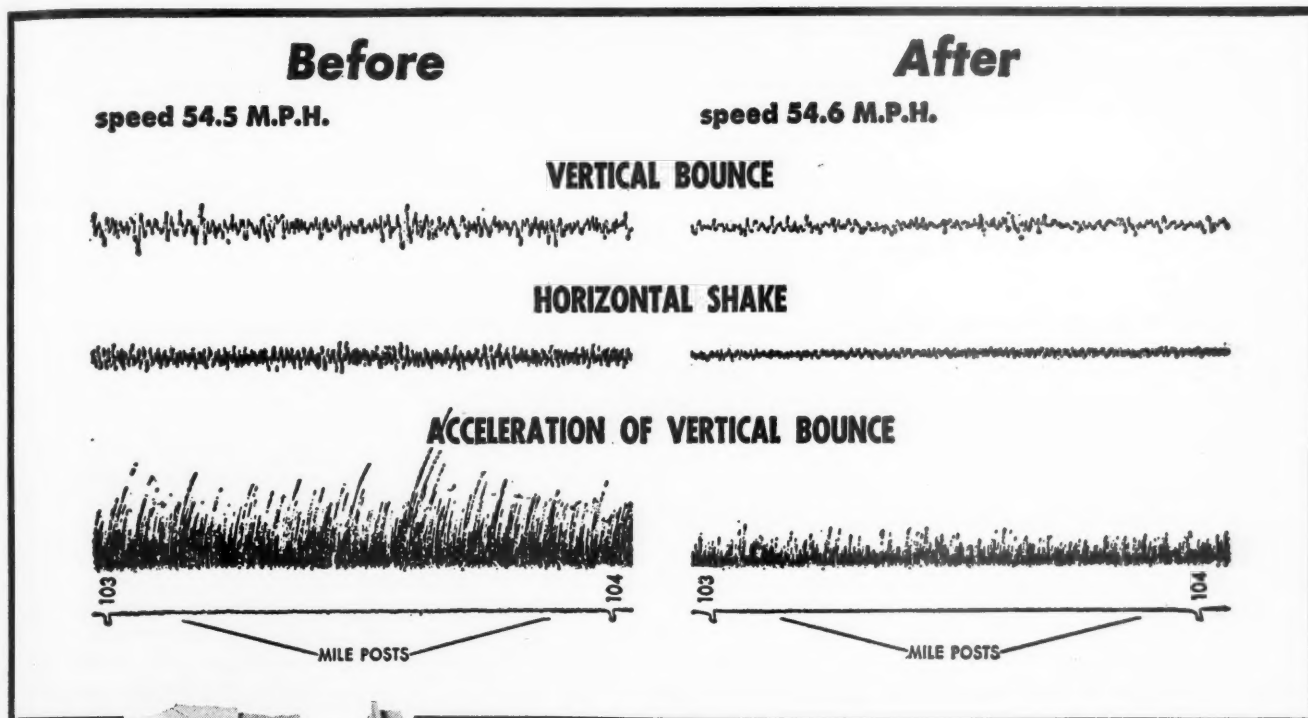


John R. Thompson

manager, advertising sales of Simmons-Boardman in September, 1944. He was elected also vice-president of the company in February, 1946.

Mr. Thompson, who was born on July 23, 1900, and educated at the University of Toronto, has devoted his entire business career to the newspaper and business publishing fields. Immediately upon leaving college in 1918 he became assistant financial editor of the *Toronto Globe*, with headquarters at Toronto, Ont., and from 1920 to 1923 he was a junior account executive in the advertising agency of A. McKim Ltd., at Toronto. The following year he became advertising manager of Consolidated Press, at Toronto. In 1925 Mr. Thompson went with the Maclean-Hunter Publishing Corporation and for 13 years he was manager of its Chicago office. During the next three years he was advertising manager of Maclean's magazine, with headquarters at Toronto, and in 1940 he returned to Chicago as vice-president and treasurer of the corporation in full charge of the publishing activities of its business journals (*Inland Printer*, *Chemical Industries*, *Rock Products*) in the United States. He was holding these positions at the time of joining the

How to cure a ROUGH-RIDING LOCOMOTIVE



FRANKLIN E-2 BUFFERS will reduce maintenance by damping and absorbing horizontal shake and vertical vibration.

The E-2 radial buffer incorporates a built-in draft gear with large bearing areas. Two large adjusting wedges, energized by compressed springs, hold the chafing plates in firm contact, permitting no slack but retaining complete freedom of movement between engine and tender. This effectively dampens and absorbs both horizontal shake and vertical vibration of the locomotive. Only the Franklin "E" type buffers provide this shock absorbing action.

The E-2 radial buffer will make any locomotive, at any speed, a better riding engine. It requires minimum attention and will cut down maintenance on many related locomotive parts by markedly reducing shake and bounce. Crews appreciate the greater comfort it brings.

The above charts show the effectiveness of this buffer. These charts were made on a western road — two days apart — on the same locomotive, between the same mileposts, pulling the same trainload in the same direction at the same speed. The E-2 buffer, as compared with the wedge-type buffer originally used, reduced vertical bounce 50%, horizontal shake 66%, and acceleration of vertical bounce (impact factor) 62%.



FRANKLIN RAILWAY SUPPLY COMPANY

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

staff of Simmons-Boardman as district manager of advertising sales, transportation papers.

William O. Martin, who has invented numerous railway devices and was formerly in engine service with Missouri Pacific, has joined the Spring Packing Corporation, at Chicago, as assistant vice-president for the purpose of exploiting additional inventions and developments.

M. B. Garber, assistant sales manager and export manager of the Thew Shovel Company since 1937, has been appointed general sales manager to succeed Don G. Savage, who died on July 25. Q. J. Winsor, previously assistant to the general sales manager and district sales manager for the east-central territory, and J. T. Cushing, previously district sales manager for the west coast, have been appointed assistant general sales managers.

Russell Kreinberg has been elected president of the Electric Service Manufacturing Company. Ira W. Schmidt has been elected vice-president and sales director; E. A. Leinroth, vice-president and treasurer; H. J. Graham, vice-president in charge of manufacturing; J. R. McFarlin, vice-president and secretary; and D. B. Reeves, assistant treasurer.

Edward W. Fitzgerald has been appointed by the Great Lakes Steel Corporation as sales representative for the firm's nailable steel flooring. Mr. Fitzgerald, formerly associated with the Union Asbestos & Rubber Co., will have offices at 20 North Wacker drive, Chicago.

The Dixie Cup Company (Canada) will construct a manufacturing plant at Brampton, Ont. Scheduled for completion within a year, including the installation of machinery, the new plant will have a total area of 50,000 sq. ft.

CAR SERVICE

Revised I.C.C. Service Order No. 822 on September 1 will supplant Service Order No. 822 which became effective August 10. The present order authorizes the substitution of specified refrigerator cars for box cars for shipments from eastern and southern points to points in Oregon and Washington. The revised order will eliminate Oregon, thus confining the authorized destination territory to points in Washington. The expiration date will remain the same—December 10.

I.C.C. Service Order No. 768 has been modified by Amendment No. 2 which sets back the expiration date from September 1 until March 1, 1949. The order allows a maximum of 5 days free time on box cars loaded with

freight transferred from vessels to cars, and requires that such cars shall be forwarded within 24 hours after receipt of forwarding directions.

The Office of Defense Transportation has issued General Permit ODT 18A, Revised—3B, effective August 26. It exempts from minimum-loading requirements carload shipments of cotton to, from or between points in states other than Arizona and California. Also, it prohibits the use of more than two cars for "carload" shipments of flat cotton from points of origin in Arizona and California to compress points in those states.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

The Missouri Pacific Lines have ordered 1,000 70-ton gondola cars from company shops at De Soto, Mo. Deliveries are scheduled to begin next February. Five hundred of the cars are for the Gulf Coast Lines and 500 are for the International-Great Northern. The authorization to purchase this equipment was reported in *Railway Age* of May 8.

The New York, Chicago & St. Louis is inquiring for 300 40½-ft. 50-ton box cars and 200 50-ft. 50-ton box cars.

LOCOMOTIVES

C. of N. J. to Purchase 14 Diesel Locomotives

E. T. Moore, chief executive officer of the Central of New Jersey, announced this week he has recommended to the roads' trustee that the Newark, N. J., federal court be asked for authority to purchase 14 1,500-hp. Diesel-electric locomotives at a cost of more than \$2,000,000. Twelve of the new Diesels are to be assigned to passenger service and 2 to freight service as another step in modernizing and improving suburban-commuter passenger service. It is anticipated that the first of the new locomotives will be delivered in late September or early October and that the entire lot will be in operation before March, 1949. With these additional Diesels, all passenger trains operating between the Jersey City, N. J., and Raritan terminals on the road's main line, and 80 per cent of the Jersey Central trains on the New York & Long Branch, will be Diesel-powered.

SIGNALING

The Netherlands Railways have ordered equipment from the General Railway Signal Company for the installation of an NX, all-relay electric interlocking at S'Hertogenbosch, Netherlands. The 27

by 132-in. point-indicator control panel will have 72 track indication lights, 68 entrance knobs, 71 exit buttons and 52 test keys for the control of 94 switch machines, a switch lock and 67 signals. Type B plug-in relays and Type SA searchlight signals will be used in this installation.

The St. Louis-San Francisco has placed an order with the Union Switch & Signal Co. covering the material for the installation of centralized traffic control between Fort Scott, Kan., and Afton, Okla., 88 mi. A Style C 7.5-ft. control machine will be installed at Fort Scott to operate the entire section, with part of the territory to be controlled by coded carrier. In addition to the control machine, the order includes coding and carrier equipment, Style H-2 searchlight high and dwarf signals, M-22A electric switch movements, Style SL-6A electric switch locks, relays, rectifiers, transformers and housings. The installation work will be handled by railroad forces.

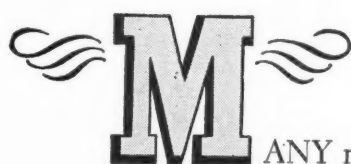
CONSTRUCTION

Atchison, Topeka & Santa Fe—This road has awarded the following contracts: To the Martin K. Eby Construction Company, Wichita, Kan., for an extension to the freight house at Wichita; and to the Day Company, Minneapolis, Minn., for the installation of a dust collecting system in units 1, 2 and 4 of Elevator "A," at Argentine, Kan.

Gulf, Mobile & Ohio.—Examiner P. C. Albus has recommended in a proposed report that Division 4 of the Interstate Commerce Commission deny this road's application for authority to construct and operate a line extending from Federal, Ill., to a connection with the tracks of the Alton Box Board Co., approximately 0.5 mile. The Alton plant is now served exclusively by the Illinois Terminal. The examiner said that the proposed extension would not enable the shipper to acquire any material benefits in connection with railroad routes or rates. "In situations where, as here, existing facilities are physically available," he added in part, "the addition of more facilities clearly is unwarranted unless it is apparent that some unsurmountable obstacle operates to prevent use, in full, of the facilities already in existence."

Long Island.—This road has awarded the following contracts, the estimated costs of which are shown in parentheses: To the Auserehl & Son Contracting Corp., Jamaica, N. Y., for a new passenger station at Kings Park, N. Y. (\$55,000); to Charles F. Vachris, Inc., Brooklyn, N. Y., for constructing a bridge and a storm and sanitary sewer at Laurelton, N. Y. (\$542,000); and to

IN MODERNIZING STEAM MOTIVE POWER



ANY railroads are installing Security Circulators in their existing locomotives to increase steaming efficiency and to decrease boiler maintenance.

Steaming performance is improved because the additional evaporating surface aids the locomotive to get up steam more rapidly, while the quickened flow of water from the side water-legs (through the Circulators) over the crown sheet helps to maintain maximum boiler output.

Boiler maintenance is reduced because the Security Circulators definitely lessen honeycombing, flue plugging and cinder cutting. They also furnish an ideal support for a 100% brick arch and prolong the life of the brick.

SECURITY CIRCULATOR DIVISION

AMERICAN ARCH COMPANY INC.

NEW YORK • CHICAGO

the American Steel & Wire Co., New York, for permanent fencing at Rockaway Beach, N. Y. (\$51,000).

Pennsylvania.—This road has announced plans for the construction of a new passenger station at Burlington, N. J., to cost approximately \$40,000. It is expected the new facilities will be in operation early this winter. The new station will be located on the north side of the track, about 2,000 ft. west of the present station. With overall dimensions of 50 ft. by 16 ft., the new building will have radiant heating set into its concrete floors. Two sides of the waiting room will be almost completely formed of windows. Inside, as well as out, the walls will be of light gray tapestry brick with light-colored trim.

Southern.—This road has awarded the following contracts, the estimated costs of which are shown in parentheses: To the Codell Construction Company, Winchester, Ky., for replacing a steel viaduct with a reinforced concrete pipe culvert and the fill on new alignment, near Taswell, Ind. (\$132,800); and to the H. W. Miller Construction Company, Covington, Ky., for an addition to a freight office at Cincinnati, Ohio (\$83,000). All work on the following authorized projects, the probable costs of which are shown in parentheses, will be done by the road's own forces: Rebuilding a trestle near Lumberton, Miss. (\$25,500); reconstructing a bridge over the Cahaba river near Lake Lanier, Ala. (\$59,600); installing flashing-light crossing signals at street crossings in Knoxville, Tenn. (\$46,000); rebuilding an overhead bridge in Elsmere, Ky. (\$29,000); replacing a timber trestle with a steel bridge near Irondale, Ala. (\$40,800); installing Diesel locomotive repair facilities at Birmingham, Ala. (\$75,000); rearranging tracks and other facilities to provide double-track operation in the Knoxville yard (\$93,200); and constructing industry tracks at Gastonia, N. C. (\$34,840).

ABANDONMENTS

Examiner A. G. Nye has recommended in a proposed report that Division 4 of the Interstate Commerce Commission permit the **Delaware, Lackawanna & Western** to abandon its 3.1-mile loop track serving Rockaway, N. J., which is about one mile off the main line in the vicinity of Denville. The road also has applied for authority to abandon approximately 5,900 ft. of track in Northumberland, Pa., to secure elimination of 8 grade crossings, in lieu of which the applicant seeks authority to operate under trackage rights over an adjacent line of the Pennsylvania.

FINANCIAL

Atlantic & Danville.—*New Directors.*—Earl L. Keister, superintendent of the Southern's Danville division, whose election as president of the Atlantic & Danville is reported elsewhere in this issue, has been elected a member of the A. & D.'s board of directors, as have Louis Grumet and Samuel Kresberg of New York, Edward E. Syren of Philadelphia, Pa., and Stephen D. Szego of Peekskill, N. Y. Edgar Newgass, former president of the A. & D.; George M. Lanning and D. E. Taylor, former vice-presidents; Felix Rose; James Guthrie; and E. L. Woodard have resigned as directors.

Belt of Chicago.—*Annual Report.*—Operating revenues of this road last year totaled \$10,193,921, compared with \$7,895,544 in 1946. Operating expenses amounted to \$6,905,932, compared with \$5,889,310. Fixed charges were \$1,649,908, compared with \$1,616,266. Net income was \$184,147, compared with a net deficit of \$901. Current assets at the end of the year were \$3,591,901, compared with \$2,642,609. Current liabilities were \$1,991,886, compared with \$1,499,116.

Boston & Maine.—*Stock Adjustment.*—This road has applied to the Interstate Commerce Commission for authority to alter or modify, pursuant to the provisions of the Mahaffie Act, its various classes of capital stock so as to create a single class of capital stock, consisting of 816,853 shares of common stock, in place of the present eight classes, amounting to 1,043,473 shares, currently outstanding. The new stock would have a par value of \$100 per share.

The B. & M. told the commission that the plan will eliminate "confusion" in its capital structure resulting from the "excessive number" of classes of stock now outstanding with "varying rights and large amounts of accrued dividends." With the capital stock modified to one issue of common stock, it said, the stockholders should have a security with "improved marketability and better public acceptance."

Under the plan, each share of the present capital stock would be converted into the new common stock as follows: 2.75 shares of common for each share of prior preference 7 per cent stock; 0.37 share of common for each share of series A first preferred 5 per cent; 0.47 share of common for each share of series B first preferred 8 per cent; 0.44 share of common for each share of series C first preferred 7 per cent; 0.54 share of common for each share of series D first preferred 10 per cent; 0.35 share of common for each share of series E first preferred 4½ per cent; 0.07 share of common for each share of preferred non-cumulative 6 per cent; and 0.05 share of common for each present share of common stock.

New York, New Haven & Hartford.—*To Pay 6% Bonds.*—At the meeting of this road's board of directors on August 31 payment of the secured 6 per cent gold bonds of 1940 will be authorized, it was announced on August 24. Frederick C. Dumaine, Jr., chairman and president, said cash has been deposited with the Irving Trust Company to enable that bank to pay the holders of these bonds the unpaid principal and the interest due. The payment of these securities will result in the surrender of the collateral held by the Irving Trust Company as trustee, consisting of 62,090 shares of preferred stock, which will be retired, \$8,200,785 of first and refunding 4 per cent mortgage bonds of 2007 and \$11,695,164 of general mortgage 4½ per cent income bonds of 2022, which will be held for the present in the company's treasury.

Pacific Electric.—*Acquisition.*—Division 4 of the Interstate Commerce Commission has authorized this road to acquire from the Southern Pacific a 0.7-mile line from a point near Dyer, Cal., to a point near New Delhi, over which it has operated since 1912 under a trackage rights agreement.

Southern Pacific.—*Control of Dawson.*—Division 4 of the Interstate Commerce Commission has authorized this road to acquire, through stock ownership, control of the Dawson, which it operates under lease. The Dawson extends from Tucumcari, N. M., to Dawson, approximately 132 miles. All capital stock of the Dawson, consisting of 10,000 shares, is owned by the Dawson Railway & Coal Co., a wholly owned subsidiary of the S.P.

New Securities

Application has been filed with the Interstate Commerce Commission by:

Wheeling & Lake Erie.—To assume liability for \$1,600,000 of series Q equipment trust certificates, the proceeds of which will be applied toward the purchase of 500 50-ton, high-side gondola cars from the Bethlehem Steel Company. The estimated cost of the cars is \$4,000 each. The certificates, to be sold on the basis of competitive bidding, would be dated September 15 and would mature in 10 annual installments of \$160,000, starting September 15, 1949.

Division 4 of the I.C.C. has authorized:

Pennsylvania.—To assume liability for \$841,000 of 3 per cent general mortgage bonds which its lessor, the United New Jersey Railroad & Canal, has been authorized to issue and deliver to it. The issue, to be dated September 1 and mature March 1, 1984, will reimburse the Pennsylvania for expenditures made in payment of a like amount of general mortgage 4 per cent gold bonds, due September 1.

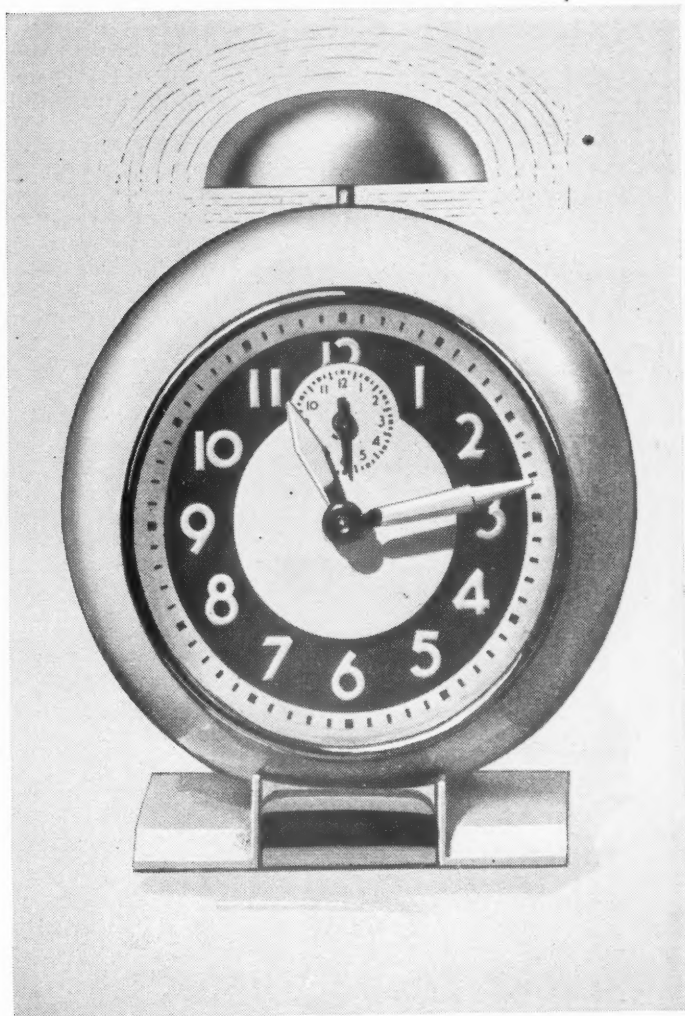
St. Louis-San Francisco.—To assume liability for \$5,550,000 of series B equipment trust certificates, the proceeds of which will be applied toward the purchase of equipment estimated to cost \$7,403,015, as outlined in *Railway Age* of August 7, page 51. The certificates

A HIGH-WATER ALARM

When moisture enters the dry pipe inlet, due to either foaming or high water...the Elesco Steam Dryer System goes into action.

A light in the cab indicates to engineer when boiler is foaming or water is too high, enabling him to regulate the supply. The separator in dry pipe discharges dry steam to the superheater units and the automatic discharge valve disposes of the separated water to the ground. This discharged water consists of only carryover or foaming.

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will be dated August 15 and will mature in 15 annual installments of \$370,000, starting August 15, 1949. The report also approves a selling price of 99.22 with a 2½ per cent interest rate, the bid of Salomon Brothers & Hutzler and associates, on which basis the average annual cost will be approximately 2.74 per cent. The certificates were reoffered to the public at prices yielding from 1.6 per cent to 2.875 per cent, according to maturity.

RAILWAY OFFICERS

EXECUTIVE

Earl L. Keister, superintendent of the Southern's Danville division, has been elected president of the Atlantic & Danville to succeed Edgar Newgass of London, England. **George M. Lanning** and **D. E. Taylor**, vice-presidents of the A. & D., have resigned.

Robert C. Bannister, whose appointment as assistant to vice-president, personnel and public relations of the New York Central system at New York was reported in *Railway Age* of August 21, was born on August 25, 1910, at Des Moines, Iowa. Mr. Bannister attended the Wharton School of the University of Pennsylvania and the Chicago-Kent College of Law. Entering railroad service in 1930 as machinist helper on the Chicago, Rock Island & Pacific at Valley Junction, Iowa, he became rodman the following year. In 1932 he went with the Chicago & North Western as clerk in the traffic department,



Robert C. Bannister

becoming district claim agent in 1936 and supervisor, workmen's compensation in 1939. In 1940 Mr. Bannister entered private law practice at Chicago and from 1942 to 1945 he was in the service of the U. S. Navy. He returned to the Chicago & North Western at Chicago in 1946 as general attorney which position he held until his recent appointment as assistant to

vice-president, personnel and public relations of the New York Central. Mr. Bannister served as counsel for carriers in 1945 and 1947 on national wage and rules cases.

E. F. Bidez, assistant to the comptroller of the Central of Georgia, has been appointed executive assistant, reporting to President M. J. Wise, with headquarters as before at Savannah, Ga. A native of Rockmart, Ga., Mr. Bidez was first employed by the Central of Georgia in 1917 as a clerk in the division accounting office at Columbus, Ga., and has served as traveling accountant, traveling auditor, division accountant, chief clerk, assistant auditor of disbursements, and assistant to the comptroller. He was stationed at Columbus from 1917 to 1920, at Macon, Ga., from 1920 to 1932, and at Savannah since 1932. Mr. Bidez's duties for the past several years have been largely in connection with the reorganization of the property.

OPERATING

C. H. Lineberger, Jr., whose appointment as division superintendent of the Seaboard Air Line at Tampa, Fla., was reported in the *Railway Age* of August 14, was born on March 31, 1904, at Columbia, S. C. and attended Clemson



C. H. Lineberger, Jr.

College. He entered railroad service in September, 1931, with the Seaboard as assistant to division engineer at Howells, Ga., becoming yardmaster there two years later and transferring to Savannah, Ga., in March, 1934. Mr. Lineberger was appointed assistant trainmaster at Arcadia, Fla., on August 25, 1936; trainmaster at Hamlet, N. C., on June 1, 1939; and assistant superintendent of the Carolina division at Charleston, S. C., on May 4, 1944. He served in the latter capacity until his recent promotion.

I. L. Fardal, assistant superintendent of the Minneapolis-Duluth division of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Minne-

apolis, Minn., has been promoted to superintendent at Enderlin, N. D., succeeding the late **B. G. Gross**. Mr. Fardal is succeeded by **K. R. Bovee**, trainmaster at Enderlin.

Succeeding Mr. Bovee is **F. L. Koblika**, trainmaster at Thief River Falls, Minn., who in turn is replaced by **J. A. Welton**.

Harrison M. Diver, superintendent of the Canton at Baltimore, Md., has been appointed general manager, with the same headquarters. The office of superintendent has been abolished.

Frank Cousar, former assistant to the general superintendent of the Railway Express Agency at New York, has been appointed general superintendent of motor vehicle equipment, with the same headquarters, and not superintendent of motor vehicle equipment, as was erroneously reported in *Railway Age* of July 31, page 273.

FINANCIAL LEGAL and ACCOUNTING

George W. Oakley, whose appointment as assistant comptroller of the Erie at Cleveland, Ohio, was announced in *Railway Age* of August 14, was born at Hawthorne, N. J., on February 22, 1897. Mr. Oakley attended the public schools of Hawthorne, Cleveland College and Western Reserve University, Cleveland, entering the service of the Erie in the timekeeping and accounting department at Jersey City, N. J., in November, 1911. During World War I he was furloughed by the Erie for



George W. Oakley

service in the United States Army, and upon his return to the road in January, 1919, he was named assistant chief clerk in the Jersey City accounting bureau, shortly thereafter becoming chief clerk. In January, 1920, he was appointed division accountant at Port Jervis, N. Y., and one year later was transferred to Jersey City. In March, 1921, he was appointed chief clerk to the auditor of disbursements, in which position he served successively at New



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York and Cleveland, and in June, 1933, he became chief clerk to the president at Cleveland. On September 1, 1936, Mr. Oakley became general accountant in the comptroller's office at Cleveland and in March, 1944, was promoted to assistant auditor of revenues. In July, 1946, he was advanced to auditor of disbursements at Cleveland, the post he held until his recent promotion to assistant comptroller.

Carl G. Lehmann, whose appointment as assistant comptroller of the Erie at Cleveland, Ohio, was reported in *Railway Age* August 14, was born on November 1, 1895, at Windham, Ohio.



Carl G. Lehmann

Mr. Lehmann attended the Windham and Warren, Ohio, high schools and various accounting and business administration schools and courses, becoming a Certified Public Accountant. He entered railroad service on February 1, 1942, as assistant to comptroller of the Erie at Cleveland, which position he held at the time of his recent promotion.

Russell A. McGuigan, whose appointment as freight claim agent of the New



Russell A. McGuigan

York, New Haven & Hartford at Boston Mass., was reported in *Railway*

Age of August 14, entered railroad service in the freight accounting department of the New Haven in 1916 and served in various clerical positions until his appointment as accountant in 1935. He was appointed assistant to auditor of freight receipts in 1943 and occupied that position until the time of his recent promotion.

Alex J. Brady, whose appointment as assistant comptroller of the Erie at Cleveland, Ohio, was reported in *Railway Age* of August 14, was born on March 6, 1886, at New York, and attended Drakes Business College and New York University, specializing in accounting and business finance. Mr. Brady entered railroad service on September 17, 1898, with the Erie as clerk

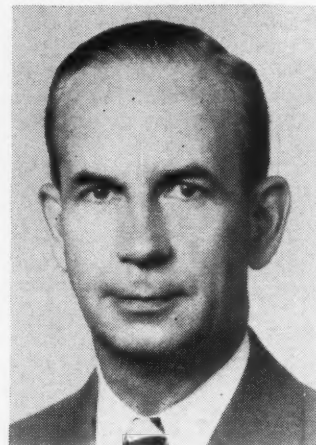


Alex J. Brady

in the office of the auditor of revenues, where he remained until September, 1917, when he became bookkeeper in the comptroller's office. He then served successively as statistician, accountant, chief clerk to comptroller, tax accountant and general accountant, becoming assistant to comptroller in September, 1936, and serving in the latter capacity until his recent promotion.

George W. Thompson, whose appointment as auditor of disbursements of the Erie at Cleveland, Ohio, was reported in *Railway Age* of August 14, was born on April 12, 1898, at Paterson, N. J. After attending grade and high schools, Mr. Thompson attended the New York University School of Commerce for one year (nights). He entered railroad service on August 20, 1919, with the Erie as freight and passenger clerk in the office of the auditor of disbursements at New York, becoming open account and expense clerk four months later. On September 16, 1921, he became payroll and head expense clerk at New York and on November 1, 1926, he was appointed head voucher clerk at New York. Mr. Thompson went to Cleveland on April 16, 1934, as assistant chief clerk, be-

coming assistant auditor of disbursements there on August 15, 1944, which



George W. Thompson

position he held until his recent promotion.

TRAFFIC

Oliver J. Grimes, whose promotion to general traffic manager of the Denver & Rio Grande Western, at Denver, Colo., was reported in the *Railway Age* of July 31, was born on October 11, 1880, at Mt. Meridian Ind. Mr. Grimes first entered railroad service in 1900 as a towerman and telegrapher with the Terre Haute & Indianapolis (now part of the Pennsylvania), at Vandalia, Ill. He served also as agent and dispatcher with the T.H. & I. until May, 1905, when he joined the Chicago & Eastern



Oliver J. Grimes

Illinois, serving as dispatcher and assistant chief dispatcher until 1907. He was later employed by the St. Louis-San Francisco as chief dispatcher and relief trainmaster, and as dispatcher and acting chief dispatcher with the Oregon Short Line. Mr. Grimes was out of the railroad field from 1912 to 1937, during which time he held the following positions: editorial post, Salt Lake Telegram and Salt Lake Tribune; secretary to governor of Utah; member

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State Board of Equalization and Assessment, state of Utah; special writer, Salt Lake Tribune; executive secretary, Utah Coal Producers Association; western manager, National Coal Association, Chicago; assistant to director, Reconstruction Finance Corporation, Washington, D. C.; and executive assistant to secretary of war, Washington, D. C. He was appointed assistant traffic manager of the Rio Grande, at Salt Lake City, in 1937, and assistant general traffic manager at Denver in 1940. Mr. Grimes was holding the latter position at the time of his recent advancement.

James J. Hickey, general agent of the Western Pacific, has been promoted to general passenger agent, with headquarters remaining at San Francisco, Cal. Mr. Hickey was born in Park City, Utah, on June 13, 1901, and began



James J. Hickey

his transportation career in 1923 as secretary to the general passenger agent of the Los Angeles Steamship Company, later serving as city ticket agent, city passenger agent and district passenger agent. He entered the service of the W.P. in June, 1934, as city passenger agent, and was advanced to general agent on January 1, 1938, the position he held at the time of recent advancement.

James M. Sullivan has been appointed district freight and passenger agent of the Southern, with headquarters at West Palm Beach, Fla., effective September 1.

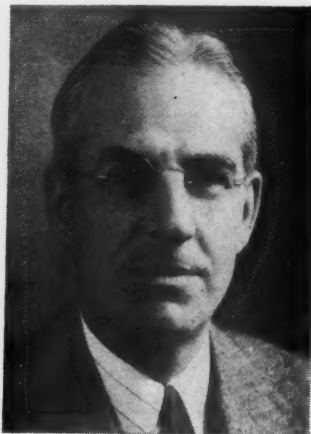
Elmer E. Gordon, general passenger agent of the Chicago & Eastern Illinois at Chicago, will become passenger traffic manager at that point on September 1.

MECHANICAL

J. E. Gogerty, general locomotive foreman of the Union Pacific, with headquarters at Cheyenne, Wyo., has been appointed superintendent of production at the company's Omaha (Neb.) shops.

PURCHASES and STORES

Walter Muir Holmes, whose appointment as purchasing agent of the Canadian National at Halifax, N. S. was announced in *Railway Age* of August 14, joined the C.N.R. in 1920 as a clerk in the purchasing department at Toronto, Ont. In 1923, he was appointed as-



Walter Muir Holmes

stant accountant in the purchasing department and in 1927 he became chief buyer at Detroit, Mich., removing to Montreal as acting assistant to the general purchasing agent in 1942. At the time of his new appointment, Mr. Holmes was serving as assistant to the general purchasing agent at Montreal.

H. E. Nelson has been appointed division storekeeper of the Northern Pacific at Glendive, Mont.

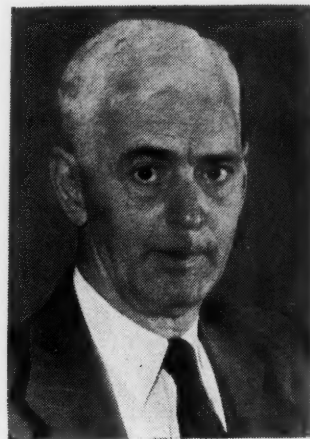
A. S. Coombs, chief clerk in the purchasing department of the Toronto, Hamilton & Buffalo, has been appointed purchasing agent, with headquarters as before at Hamilton, Ont., succeeding the late H. H. Disher.

ENGINEERING and SIGNALING

B. Bristow, division engineer of the Burlington-Rock Island at Houston, Tex., has been appointed engineer, maintenance of way, of the Chicago, Rock Island & Pacific, with headquarters at Chicago. Mr. Bristow succeeds to a portion of the duties of the late H. T. Livingston, chief engineer maintenance of way and structures. The latter position has been abolished. Succeeding Mr. Bristow is W. H. Bogle.

C. B. Bronson, inspecting engineer of the New York Central System, has been promoted to assistant engineer maintenance of way—system, with headquarters remaining at New York, succeeding the late Charles H. Morse, whose death was reported in *Railway Age* of July 10. Mr. Bronson was born at Akron, Ohio, and received his engineering degree from what is now Illinois Institute of Technology, and was an

instructor for two years. He entered railway service in 1913 with the New York Central Lines (System) on special assignments for Dr. P. H. Dudley, consulting engineer, rails, ties and struc-



C. B. Bronson

tural steel. He then became assistant inspecting engineer in 1924 and inspecting engineer in 1934, continuing in the latter position until his recent appointment.

SPECIAL

Harold C. McKinley has been appointed director of public relations of the New York, Chicago & St. Louis, with headquarters at Cleveland, Ohio.

Oliver C. Marquess has been appointed superintendent of investigation of the Grand Trunk Western-Canadian National, with headquarters at Detroit, Mich., succeeding Hugo F. Brandes, who has retired.

OBITUARY

L. I. Davis, general agent of the Nashville, Chattanooga & St. Louis, with headquarters at Louisville, Ky., died on August 12.

F. J. Gehan, general attorney of the Northern Pacific, with headquarters at St. Paul, Minn., died in that city on August 21, following a lengthy illness.

Frank A. Peil, assistant to president of the Denver & Rio Grande Western, at Denver, Colo., died at his home in that city on August 4, following a heart attack.

B. G. Cross, superintendent of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Enderlin, N. D., died recently.

H. H. Disher, purchasing agent of the Toronto, Hamilton & Buffalo at Hamilton, Ont., for the past 26 years, died suddenly at his home in that city on July 31.

large plants on the line of the S & A



Freight Operating Statistics of Large Steam Railways—Selected

		Locomotive miles			Car-miles		Ton-miles (thousands)		Road locos. on line					
Region, road and year		Miles of road operated	Train-miles	Principal and helper	Light	Loaded (thousands)	Per cent loaded	Gross excl. locos. & tenders	Net rev. and non-rev.	Unstored	Stored	B.O.	Percent B.O.	
New Eng. Region	Boston & Albany.....	1948	362	125,579	128,889	11,924	3,208	65.9	207,089	89,128	53	9	33	34.7
		1947	362	153,503	164,291	19,151	3,605	64.4	231,167	96,080	60	2	28	31.1
	Boston & Maine.....	1948	1,746	308,734	319,575	16,370	11,831	70.0	744,700	325,171	88	4	20	17.9
		1947	1,750	324,449	331,859	11,238	11,907	73.9	714,947	315,994	107	16	13	9.6
	N. Y., N. H. & Htfd.....	1948	1,815	347,719	667,790	53,268	13,898	69.9	844,273	377,421	186	16	41	16.2
	1947	1,815	381,327	526,545	41,693	14,523	70.9	854,205	371,975	199	3	24	19.7	
Great Lakes Region	Delaware & Hudson.....	1948	794	287,208	350,852	39,240	12,803	68.6	918,062	495,467	140	30	24	12.4
		1947	794	294,103	353,812	33,153	12,785	69.7	911,113	494,963	123	40	30	15.5
	Del., Lack. & Western.....	1948	970	319,229	357,999	37,140	14,063	70.1	935,990	443,610	104	27	19	12.7
		1947	970	335,552	380,398	45,925	14,579	68.7	971,576	444,545	114	8	17	12.2
	Erie.....	1948	2,229	691,767	735,688	60,541	36,434	65.8	2,439,541	1,076,582	249	43	78	21.1
		1947	2,229	790,471	840,931	61,610	38,287	65.6	2,540,453	1,074,468	281	16	87	22.7
	Grand Trunk Western.....	1948	972	298,094	306,359	2,883	9,769	66.7	654,493	297,070	65	3	14	17.1
		1947	972	298,443	305,262	2,502	10,126	67.2	652,138	282,902	66	..	6	8.3
	Lehigh Valley.....	1948	1,239	319,039	357,253	49,871	13,457	68.5	921,744	458,202	92	5	42	30.2
		1947	1,239	343,190	380,542	61,463	14,932	66.9	1,035,954	502,957	118	13	38	22.5
Central Eastern Region	New York Central.....	1948	10,351	3,319,803	3,568,300	241,711	121,481	62.8	8,637,166	4,092,952	1,038	73	307	21.7
		1947	10,338	3,407,066	3,657,338	248,043	126,001	63.4	8,704,427	4,027,763	1,057	17	326	23.3
	New York, Chic. & St. L.....	1948	1,656	622,975	632,534	8,332	25,760	68.6	1,657,994	739,056	136	15	18	10.7
		1947	1,656	690,223	695,053	9,080	27,398	66.5	1,766,656	755,070	138	5	20	12.3
	Pitts. & Lake Erie.....	1948	223	96,092	98,377	43	4,696	69.8	396,662	244,039	32	..	15	31.9
		1947	223	109,821	113,237	157	4,631	65.0	394,260	232,608	34	..	13	27.7
	Wabash.....	1948	2,381	639,793	652,979	15,366	23,371	70.5	1,491,966	663,418	152	15	36	17.7
		1947	2,381	680,056	694,976	15,520	24,414	71.4	1,535,473	669,100	164	2	39	19.0
	Baltimore & Ohio.....	1948	6,076	2,063,980	2,550,318	283,269	74,052	63.9	5,532,998	2,800,646	814	1	321	28.3
		1947	6,103	2,180,456	2,756,246	318,320	76,017	63.4	5,635,251	2,818,017	841	2	302	26.4
Poca-hontas Region	Central of New Jersey*.....	1948	417	81,339	85,194	8,971	3,316	66.5	249,248	131,268	38	2	22	35.8
		1947	419	87,575	98,596	17,963	3,287	66.6	238,931	125,582	48	..	28	36.5
	Central of Pennsylvania.....	1948	213	80,345	91,271	16,879	3,231	69.4	238,148	131,278	34	2	14	28.0
		1947	213	86,296	100,894	21,482	3,467	70.3	230,360	120,303	45	..	17	27.4
	Chicago & Eastern Ill.....	1948	909	182,663	183,453	3,851	5,974	68.0	412,101	209,614	50	..	18	26.5
		1947	910	189,184	190,200	3,535	5,822	70.2	384,549	189,982	57	1	15	20.5
	Elgin, Joliet & Eastern.....	1948	391	116,406	119,868	3,266	3,992	67.7	310,771	172,119	42	..	2	4.5
		1947	391	124,657	129,732	4,104	3,923	68.0	297,370	161,641	43	7	13	20.6
	Pennsylvania System.....	1948	10,023	3,938,270	4,452,573	544,922	160,902	64.5	11,703,290	5,866,014	1,830	30	253	12.0
		1947	10,031	4,223,894	4,794,525	660,428	165,494	65.6	11,744,224	5,834,840	1,942	4	303	13.5
Southern Region	Reading.....	1948	1,350	467,707	498,071	46,679	17,248	65.0	1,343,198	743,218	211	16	31	12.0
		1947	1,357	486,646	544,108	66,292	17,453	65.5	1,332,929	727,222	226	25	45	15.2
	Western Maryland.....	1948	837	218,487	263,806	39,534	7,831	62.1	643,058	353,996	154	3	14	8.2
		1947	837	247,848	302,392	39,898	8,469	61.1	719,102	395,859	156	2	11	6.5
	Chesapeake & Ohio.....	1948	5,003	1,732,781	1,866,451	93,925	78,316	58.8	6,660,576	3,767,229	593	6	98	14.1
		1947	4,980	1,835,664	1,952,594	87,524	83,144	58.3	6,983,618	3,956,052	619	8	84	11.8
	Norfolk & Western.....	1948	2,107	935,802	1,005,581	73,764	43,315	58.7	3,881,280	2,178,933	280	18	18	5.7
		1947	2,108	871,247	932,194	68,664	41,694	58.0	3,713,950	2,066,552	272	29	13	4.1
	Atlantic Coast Line.....	1948	5,552	1,086,000	1,122,985	15,688	29,237	63.4	1,956,774	862,482	362	..	85	19.0
		1947	5,556	1,136,766	1,148,903	16,553	27,878	62.6	1,882,957	821,546	371	25	62	13.5
Northwestern Region	Central of Georgia*.....	1948	1,783	326,769	333,449	5,828	8,356	71.9	549,561	267,925	102	1	9	8.0
		1947	1,782	304,520	309,047	5,094	7,607	72.7	501,384	237,249	88	1	11	11.0
	Gulf, Mobile & Ohio.....	1948	2,847	362,597	365,151	518	17,409	73.0	1,137,149	563,316	118	15	5	10.1
		1947	2,846	441,508	456,483	2,215	17,784	70.8	1,194,225	565,759	133	8	16	10.2
	Illinois Central.....	1948	6,581	1,496,058	1,503,015	52,223	54,881	64.6	3,855,881	1,849,472	564	7	93	14.0
		1947	6,582	1,573,139	1,591,915	57,040	58,087	64.6	3,989,389	1,863,201	572	19	80	11.9
	Louisville & Nashville.....	1948	4,750	1,652,838	1,786,852	50,274	42,993	62.0	3,214,915	1,626,273	411	..	73	15.1
		1947	4,759	1,661,731	1,794,158	48,493	42,660	63.1	3,116,337	1,563,068	404	1	70	14.7
	Nash., Chatt. & St. Louis.....	1948	1,051	277,312	292,111	8,468	6,464	75.4	419,356	208,252	82	..	11	11.8
		1947	1,052	277,591	300,439	8,263	6,842	79.3	415,953	201,850	91	..	16	15.0
Central Western Region	Seaboard Air Line.....	1948	4,141	923,598	986,524	12,977	27,631	64.9	1,872,834	815,878	299	2	43	12.5
		1947	4,145	921,076	679,100	11,723	26,372	66.2	1,771,473	765,003	298	1	53	15.1
	Southern.....	1948	6,449	1,712,488	1,745,936	31,388	46,242	68.2	3,007,403	1,368,726	554	16	110	16.2
		1947	6,451	1,860,839	1,890,344	31,821	47,852	70.0	3,040,275	1,382,685	583	14	105	15.0
	Chicago & North Western.....	1948	8,055	1,028,674	1,081,232	28,967	35,675	67.2	2,420,767	1,105,925	364	5	106	22.3
		1947	8,061	1,051,901	1,086,441	28,385	34,871	68.9	2,330,576	1,046,130	346	1	130	27.3
	Chicago Great Western.....	1948	1,445	211,473	211,473	8,972	8,982	69.2	589,735	266,000	47	7	23	29.9
		1947	1,445	265,655	267,874	10,731	8,749	69.7	563,005	249,240	68	..	13	16.0
	Chic., Milw., St. P. & Pac.....	1948	10,663	1,343,603	1,405,350	54,886	44,829	67.0	3,031,011	1,408,624	448	68	88	14.6
		1947	10,725	1,494,078	1,578,975	60,734	49,479	66.5	3,336,873	1,536,958	481	30	94	15.2
Southwestern Region	Chic., St. P., Minn. & Omaha.....	1948	1,606	201,194	211,737	13,063	5,462	70.8	360,994	163,387	72	1	38	34.5
		1947	1,606	203,218	215,195	12,141	5,362	71.7	348,598	155,170	74	..	32	30.2
	Duluth, Missabe & Iron Range.....	1948	569	166,114	166,760	864	9,121	5						

Items for the Month of May 1948 Compared with May 1947

Region, road and year	Fr ight cars on line			Per Cent B.O.	G.t.m.per train-hr.		Net ton-mi. per car-mi.	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Coal lb. per 1000 g.t.m. inc.-loco.	Mi. per loco. day		
	Home	Foreign	Total		excl.locos. and tenders	G.t.m.per train-mi. excl.locos. and tenders								
New Eng. Region	Boston & Albany.....1948	206	5,032	5,238	1.0	27,364	1,664	716	27.8	565	30.9	7,942	142	55.5
	.....1947	268	5,266	5,534	0.4	24,579	1,517	631	26.7	566	33.0	8,562	166	74.2
	Boston & Maine.....1948	1,956	9,811	11,767	3.5	38,258	2,418	1,056	27.5	881	45.8	6,008	108	101.5
	.....1947	1,196	10,750	11,946	1.8	34,590	2,208	976	26.5	858	43.8	5,825	107	87.9
	N. Y., N. H. & Htfd.....1948	1,341	17,580	18,921	1.7	35,287	2,431	1,087	27.2	686	34.0	6,708	75	96.1
Great Lakes Region	.....1947	1,349	18,375	19,724	2.1	32,305	2,246	978	25.6	583	32.1	6,611	93	78.6
	Delaware & Hudson.....1948	2,526	7,980	10,506	5.8	57,454	3,212	1,734	38.7	1,620	61.0	20,129	108	70.2
	.....1947	1,910	7,398	9,308	3.5	55,539	3,115	1,692	38.7	1,722	63.8	20,109	102	67.8
	Del., Lack. & Western.....1948	5,129	11,750	16,879	5.8	44,840	2,987	1,416	31.5	851	38.4	14,753	106	94.8
	.....1947	4,412	13,639	18,051	3.5	44,623	2,927	1,339	30.5	769	36.8	14,784	107	95.7
Central Eastern Region	Erie.....1948	4,473	26,358	32,831	4.0	56,708	3,552	1,568	29.5	1,099	56.6	15,580	99	75.9
	.....1947	4,968	25,045	30,013	3.2	52,745	3,239	1,370	28.1	1,136	61.7	15,550	96	82.8
	Grand Trunk Western.....1948	4,578	9,674	14,252	6.3	44,614	2,216	1,006	30.4	681	33.6	9,859	79	137.3
	.....1947	3,445	9,108	12,553	6.2	44,502	2,201	955	27.9	681	36.3	9,389	86	145.1
	Lehigh Valley.....1948	7,785	12,014	19,799	9.1	52,635	2,942	1,463	34.0	744	31.9	11,930	99	98.6
Pocahontas Region	.....1947	4,808	14,072	18,880	4.2	54,757	3,103	1,507	33.7	842	37.4	13,095	102	88.1
	New York Central.....1948	54,602	99,705	154,307	4.2	40,744	2,639	1,250	33.7	847	40.0	12,755	106	96.7
	.....1947	43,339	102,171	145,510	3.7	41,247	2,585	1,196	32.0	883	43.6	12,568	105	99.8
	New York, Chic. & St. L.....1948	2,873	12,443	15,316	1.9	51,593	2,676	1,193	28.7	1,483	75.4	14,396	94	130.9
	.....1947	2,041	14,371	16,412	2.2	50,023	2,573	1,100	27.6	1,436	78.4	14,708	86	148.7
Southern Region	Pitts. & Lake Erie.....1948	3,867	10,856	14,723	8.6	57,156	4,132	2,542	52.0	496	13.7	35,301	87	73.9
	.....1947	2,580	11,356	13,936	4.3	54,987	3,606	2,128	50.2	527	16.2	33,648	93	84.6
	Wabash.....1948	5,860	14,181	20,041	3.6	47,105	2,350	1,045	28.4	1,080	53.9	9,898	107	110.8
	.....1947	4,997	14,182	19,179	3.5	45,384	2,285	994	27.4	1,096	56.0	9,065	108	116.7
	Baltimore & Ohio.....1948	45,537	47,728	93,265	6.8	33,824	2,743	1,388	37.8	992	41.0	14,869	140	82.9
Northwestern Region	.....1947	37,384	51,082	88,466	4.9	33,159	2,641	1,321	37.1	1,025	43.7	14,895	147	89.5
	Central of New Jersey*.....1948	761	9,355	10,116	5.0	41,876	3,168	1,668	39.6	418	15.9	10,155	99	73.8
	.....1947	506	9,843	10,349	2.6	35,534	2,805	1,474	38.2	396	15.5	9,668	129	71.9
	Central of Pennsylvania.....1948	970	3,969	4,939	9.8	42,368	3,116	1,718	40.6	865	30.7	19,882	126	76.4
	.....1947	908	3,725	4,633	6.2	37,932	2,752	1,437	34.7	813	33.3	18,219	140	74.2
Central Eastern Region	Chicago & Eastern Ill.....1948	1,699	4,164	5,863	5.4	40,501	2,307	1,174	35.1	1,104	46.2	7,439	104	91.3
	.....1947	1,576	4,316	5,892	5.9	37,076	2,067	1,021	32.6	1,038	45.3	6,735	112	88.8
	Elgin, Joliet & Eastern.....1948	6,539	11,324	17,863	1.6	18,521	2,808	1,555	43.1	325	11.1	14,200	172	119.0
	.....1947	6,153	10,419	16,572	2.0	19,473	2,531	1,376	41.2	314	11.2	13,336	126	100.4
	Pennsylvania System.....1948	112,072	127,503	239,575	9.2	40,400	3,076	1,542	36.5	786	33.4	18,879	118	83.0
Pocahontas Region	.....1947	110,680	132,352	243,032	10.1	38,700	2,875	1,428	35.3	769	33.2	18,764	125	84.6
	Reading.....1948	8,992	19,946	28,938	6.0	36,181	2,878	1,592	43.1	813	29.0	17,759	101	78.6
	.....1947	7,662	25,844	33,506	2.5	36,734	2,744	1,497	41.7	680	24.9	17,287	104	76.3
	Western Maryland.....1948	3,696	3,555	7,251	1.6	32,358	2,994	1,648	45.2	1,498	53.3	13,643	147	62.4
	.....1947	2,354	7,492	9,846	1.1	32,076	2,949	1,623	46.7	1,381	48.3	15,256	144	70.8
Southern Region	Chesapeake & Ohio.....1948	43,691	29,916	73,607	2.4	56,839	3,904	2,208	48.1	1,584	56.0	24,290	78	98.5
	.....1947	47,034	33,656	80,690	1.4	58,945	3,865	2,189	47.6	1,608	58.0	25,625	75	100.7
	Norfolk & Western.....1948	24,144	7,092	31,236	2.9	66,995	4,225	2,372	50.3	2,062	69.8	33,359	88	116.2
	.....1947	28,803	7,611	36,414	2.0	68,681	4,337	2,413	49.6	1,866	64.9	31,624	86	109.9
	Atlantic Coast Line.....1948	9,155	20,572	29,727	5.2	28,637	1,809	797	29.5	903	58.3	5,011	122	89.7
Northwestern Region	.....1947	7,846	20,610	28,456	3.5	27,747	1,665	726	29.5	930	50.5	4,770	118	88.2
	Central of Georgia*.....1948	2,213	7,077	9,290	4.3	31,050	1,686	822	32.1	1,026	44.5	4,847	130	108.3
	.....1947	1,480	6,567	8,047	2.4	30,692	1,650	781	31.2	966	42.6	4,295	129	104.5
	Gulf, Mobile & Ohio.....1948	2,972	12,083	15,055	1.9	57,241	3,149	1,560	32.4	1,178	49.9	6,383	71	71.4
	.....1947	2,384	14,045	16,429	1.4	50,496	2,712	1,285	31.8	1,137	50.5	6,413	83	89.3
Central Eastern Region	Illinois Central.....1948	17,104	34,910	52,014	1.9	45,290	2,610	1,252	33.7	1,136	52.2	9,066	116	80.5
	.....1947	15,100	35,083	50,183	1.3	44,647	2,596	1,212	32.1	1,214	58.6	9,131	119	83.7
	Louisville & Nashville.....1948	27,379	16,242	43,621	4.2	29,814	1,945	984	37.8	1,198	51.1	11,044	124	130.0
	.....1947	23,062	18,539	41,601	4.3	29,200	1,876	941	36.6	1,231	53.3	10,595	125	130.7
	Nash., Chatt. & St. Louis.....1948	1,111	4,710	5,821	7.1	29,886	1,523	756	32.2	1,108	45.6	6,392	133	110.1
Southern Region	.....1947	683	5,091	5,774	4.7	28,738	1,505	730	29.5	1,079	46.1	6,189	129	101.6
	Seaboard Air Line.....1948	6,686	17,066	23,752	1.3	35,778	2,092	912	29.5	1,087	55.7	6,356	113	103.7
	.....1947	5,587	17,408	22,995	1.7	34,399	1,968	850	29.0	1,083	56.5	5,954	114	102.6
	Southern.....1948	14,036	31,784	45,820	4.5	30,318	1,770	805	29.6	978	48.4	6,846	122	89.1
	.....1947	12,664	34,154	46,818	4.4	28,440	1,652	751	28.9	966	47.7	6,914	127	95.1
Northwestern Region	Chicago & North Western.....1948	19,745	33,808	53,553	3.6	35,520	2,476	1,131	31.0	671	32.2	4,429	116	80.8
	.....1947	18,518	32,788	51,306	3.9	32,942	2,316	1,040	30.0	636	30.8	4,186	126	81.9
	Chicago Great Western.....1948	1,502	4,787	6,289	3.8	46,946	2,789	1,258	29.6	1,362	66.4	5,938	110	99.4
	.....1947	929	4,643	5,572	2.4	35,548	2,120	938	28.5	1,414	71.2	5,564	124	117.5
	Chic., Milw., St. P. & Pac.....1948	23,081	34,801	57,882	2.1	36,740	2,271	1,056	31.4	774	36.8	4,261	116	83.6
Central Eastern Region	.....1947	19,688	37,993	57,681	1.8	35,280	2,254	1,038	31.1	848	41.0	4,623	115	94.8
	Chic., St. P., Minn. & Omaha.....1948	1,124	7,303	8,427	6.5	24,549	1,852	838	29.9	646	30.5	3,282	118	71.3
	.....1947	891	6,557	7,448	7.6	23,092	1,749	778	28.9	666	32.1	3,117	112	72.8
	Duluth, Missabe & Iron Range.....1948	14,591	491	15,082	3.4	88,570	5,266	3,156	55.7	1,093	38.1	28,818	58	137.4
	.....1947	14,580	380	14,960	1.7	91,002	5,192	3,139	54.5	998	35.6	27,471	58	127.4
Northwestern Region	Great Northern.....1948	22,591	19,739	42,330	3.3	47,886	3,005	1,504	36.5	1,113	46.2	5,597	87	73.7
1947	19,950	27,727	47,677	2.9	45,977	2,871	1,429	36.3	1,010	42.4	5,812	91	82.3
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